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ABSTRACT

Ten authorities in the field of aphasia attended a 2-day workshop to discuss the vocational rehabilitation problems of the aphasic patient and to develop guidelines which could be used by the vocational rehabilitation counselor in planning rehabilitation. Presentations were made by L. Kaplan, D. McGeachy, M. Sarno, S. Ainsworth, R. L. Milisen, J. Eisenson, J. Simonson, D. Boone, H. Schuell, and M. Buck on these topics: (1) a review of literature concerning vocational rehabilitation problems of the aphasic patient, (2) the role of the speech pathologist, speech clinic, vocational rehabilitation counselor, state and federal vocational rehabilitation agencies, and other professional personnel in dealing with the problems of and providing services for the aphasic patient, and (3) associated psychological, social, physical, receptive, and expressive language problems of the aphasic patient that interfere with vocational rehabilitation. Emerging as the central theme in these papers was the emphasis on the aphasic individual--his needs, desires, and ambitions and how the clinician can help him. The counselor need s to work toward helping the patient develop vocational and other interests and activities that are within his limitations. (SB)

The Vocational Rehabilitation Problems of the Patient with Aphasia

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Social and Rehabilitation Service
Rehabilitation Services Administration
Washington, D.C. 20201

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The Vocational Rehabilitation Problems of the Patient with Aphasia

A Workshop
Sponsored by

WESTERN MICHIGAN UNIVERSITY
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FOREWORD

The Rehabilitation Services Administration is pleased to present this document which reports a workshop on the vocational rehabilitation problems of the patient with aphasia, another milestone in the efforts of the State-Federal vocational rehabilitation program to provide services to a long neglected disability group.

In this first workshop of its kind, ten authorities in the field of aphasia were brought together to discuss the vocational rehabilitation problems of the patient with aphasia, and to develop guide lines which could be used by the vocational rehabilitation counselor to facilitate his task in planning the rehabilitation of his aphasic client. The participants have successfully accomplished these goals within the context of their papers.

Their accumulated knowledge and experience provide the reader with lucid explanations, in nontechnical language, of a most complex subject which will do much to reduce the misunderstandings that have kept the aphasic patient from achieving his potential and from making a substantial contribution to society.

In reading these proceedings I am once again reminded of these words of Oliver Wendell Holmes, Jr.:

> "To live is to function.
> That is all there is to living."

This is the purpose to which vocational rehabilitation is dedicated. In its own way, this publication will help us to move closer to the fulfillment of the thought so aptly expressed by Mr. Holmes.

We must combine our affluence and our great technical knowledge to utilize our total resources so that we can restore to the asphasic patient all the physical and mental and occupational function he can achieve toward a life which has, for him, true meaning.

Through the Communication Disorders Branch of the Division of Disability Services, the RSA is proud to have been a principal mover in this workshop. It is only the beginning, but a very substantial first step in the development of a body of appropriate guides for vocational rehabilitation services for the aphasic client.

My special appreciation goes to the sponsoring institution, Western Michigan University, and to all those persons who did so much to make this document possible.

JOSEPH HUNT,
Commissioner, Rehabilitation Services Administration.

INTRODUCTION

This document provides the first comprehensive coverage of the major problem areas concerning the vocational rehabilitation of the aphasic patient as seen by ten authorities in aphasia and should help the vocational rehabilitation counselor, the speech pathologist and others to increase their understanding and appreciation of these problems.

It has been estimated that 2 million Americans are handicapped to some degree by strokes which cripple more adults than any other ailment. This is not surprising when we realize that strokes are the third-ranking killer of our time—resulting in the death of nearly 200,000 persons every year. For those who survive, there may be disastrous impairments such as paralysis, or the loss of speech—aphasia—which is the primary concern of these proceedings. Strokes are a major cause of disablement for the estimated eight million Americans on any day of the year who suffer from aphasia in various degrees, ranging from severe to mild.

The Rehabilitation Services Administration is acutely aware of the need for the expansion of services to the aphasic. The fact that about eight of every 10 stroke victims survive the acute initial phase of the disease, and that many live for some years thereafter—usually in a seriously disabled condition in which aphasia may be prominent—heightens our sense of responsibility to make vocational rehabilitation services available to all who may benefit from them.

There exists within the program of vocational rehabilitation a vast reservoir of services available to the physically or mentally disabled person. However, the vocational rehabilitation of the aphasic has not kept pace with the advances made in other disabilities. While the Rehabilitation Services Administration is proud of its achievement of having successfully rehabilitated more than 173,594 handicapped persons in 1967, we are not happy with the number of aphasic patients rehabilitated. Only 283 of these persons were aphasics and of this number 98 were reported as having aphasia as the major disability resulting from stroke. The remaining 185 were reported as having aphasia as a secondary disabling condition resulting from stroke.

The need to concentrate our efforts to provide comprehensive services to the aphasic patient becomes apparent. A concerted effort must be made to coordinate and utilize all existing resources within a community and to develop additional resources if necessary, to restore the aphasic patient to his rightful place within his family and in society.

Emerging as the central theme in these papers is the emphasis on the individual. What are his needs, his aspirations, ambitions, and desires? How can those who come in daily contact with him, from the clinician to his family and friends, help him to fulfill these needs?

These proceedings reveal a deep awareness of the burden placed upon the families of those whose loved ones are afflicted, as well as a deep sensitivity for the aphasic whose feelings of despair and loss of dignity as a result of his affliction are beyond calculation.

The point is made very clear in these papers that man is above all else an individual and that he has a separate identity with needs unique to his own personality. We should not permit the aphasic patient to lose this identity in the vast category that we choose to label as "aphasic."

Indeed, there are as many types of aphasia as there are aphasics. Each victim reacts differently to this traumatic disability which may virtually wipe out his previous existence. Suddenly he is faced with the challenge of building a new life. Salvaging as much of his past as is humanly possible, he builds upon it a meaningful present and future for himself.

When the counselor understands and accepts the uniqueness of this disability, the problem of rehabilitation is placed in proper perspective for him. The responsibility is now placed on the counselor to change his traditional concept of work for earnings as a criterion for rehabilitation, to the development of vocational and other interests and activities which are within the limits of the patient's impairment. A challenging concept in these papers equates performance by the aphasic in meeting the demands of daily living to normal man's abilities and satisfactions in productive employment.

The reader is reminded that success in "rehabilitation often consists of a frank confrontation of the patient, his family, and the community to the limitations of his disability, and to the limitations of treatment." Without this realistic frame of reference, none, from the clinician to the counselor to members of the patient's family, can help the patient to live life to its fullest. To this end, the Rehabilitation Services Administration within the structure of the Social and Rehabilitation Service, is in a unique position to stimulate the development and expansion of more meaningful services to the aphasic.

These proceedings will, hopefully, stimulate State vocational rehabilitation agencies to train special counselors to work with the aphasic patient.

Progress depends so much on this one step. Vocational rehabilitation services and related community services can then work together with much more effectiveness to restore the aphasic to society.

No less important to the client is the role of family. We are reminded repeatedly to include the family in the rehabilitation process so as to improve their understanding of the problems of the aphasic. They can then help restore the aphasic to his rightful place in both the family and society.

We are also reminded that the aphasic himself must assume a fair share of responsibility in helping himself. Of all persons involved in the rehabilitation process, he is the most significant factor. His mental attitude, his will and desire to overcome severe obstacles will contribute much to his own success or failure.

The papers contained herein will make a significant contribution in closing the gap between the life of futility and hopelessness generally exected for the aphasic, to a life of fulfillment and meaning with the assistance of the services that are available through the vocational rehabilitation program. The results of this workshop represent a major contribution in the development of specific guidelines which can be instrumental in overcoming the glaring void in the area of the vocational rehabilitation of the aphasic patient.

ACKNOWLEDGMENTS

We are indebted to the Rehabilitation Services Administration and Western Michigan University for their joint support of this workshop.

A special debt of gratitude is due to the participants at the conference; Dr. Stanley Ainsworth, Dr. Daniel R. Boone, Dr. McKenzie Buck, Dr. Jon Eisenson, Mrs. Lucille Kaplan, Miss Donalda McGeachy, Dr. Robert L. Milisen, Dr. Hildred Schuell, Mrs. Martha Sarno, and Miss Josephine Simonson for the excellence of their presentations.

Special appreciation is given to Mr. James R. Alley, formerly with the Rehabilitation Services Administration, for his steady assistance and guidance in planning the workshop and to Dr. Frank B. Robinson and Dr. Charles Van Riper for their continuing contributions.

The workshop coordinator is grateful for the participation of Dr. Eugene Cooper and Dr. Kathleen Lloyd, both of the Rehabilitation Services Administration; Mr. Ralf A. Peckham, Assistant Superintendent of the Michigan Department of Education, Division of Vocational Rehabilitation; and Mr. Edgar B. Porter, Director of Training of the National Association of Hearing and Speech Agencies.

Special thanks is also owed to Mr. Boyce R. Williams, Dr. Jamil I. Toubbeh, and Mr. Robert Dantona, of the Rehabilitation Services Administration and Dr. L. Deno Reed of the Social and Rehabilitation Service for their consultative services which made this finished project possible.

Finally, we are grateful to the graduate students of the Department of Speech Pathology and Audiology at Western Michigan University for their part in helping make this workshop a success.

CLYDE R. WILLIS, *Ph. D.*,
Associate Professor
Speech Pathology and Audiology
Western Michigan University

WELCOME

Frank B. Robinson, Ph. D.
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I want to say for the Department that we are certainly pleased to be able to serve as the host for this workshop. This is a very impressive group of people brought together by the Vocational Rehabilitation Administration. As a matter of fact, it is a rather unique representation of clinical talent, professional talent and experience and productivity. Dr. Willis has talked with me on several occasions during the last 2 or 3 weeks about the papers you people have prepared for this workshop. He has mentioned how thoughtfully they have been planned and how well they have covered the various assigned topics. It would appear that already the end-product of this workshop can hardly miss being a significant contribution. In fact, Dr. Willis talked so enthusiastically and was so excited by the contents of those papers and the sheer amount of information contained in those papers that I was reminded of the lad who saw a live penguin for the first time. He talked later with the teacher about it saying that he was certainly curious about this wonderous bird and wished that he knew more about them. So the teacher went out of his way to locate for the boy a good comprehensive reference on the subject. The lad read it and came back a couple of days later to return the book. The teacher asked the boy how he had liked it. "Well," he said, "it was alright. But the book told me more about penguins than I really care to know."

I think you people already have a nucleus for a publication that will serve the serious student as well as the interested reader who may have just encountered someone who has aphasia and would like to know something about the problem.

My principal role in the next 2 days is to assist Dr. Willis in creating an atmosphere that will facilitate and expedite the efforts of you people. I am going to make my first contribution to that responsibility right now and will not say anymore at this time.

Charles Van Riper, Ph. D.

Distinguished University Professor
Western Michigan University, Kalamazoo, Mich.

I have just returned from visiting my father who is 92 years old now and who still hunts and fishes and who has no signs of senility or any aphasia or anything else. He still is an old country doctor who makes his rounds of 50 to 100 miles a day and serves a large area. He does everything but deliver babies and major surgery. He took me along on his calls saying that he had a patient who had a stroke and that he wanted my comments about him, although he says I am not a real doctor, just a doctor who talks.

On our way back, he said, "You know those stroke patients, those are the tough ones, a young man especially. But even for the old ones, it's a miserable way to die. I'm glad I'm not going to die that way." I said, "How can you predict?" He answered, "I have low blood pressure. I eat well. I live well. I have my roots down in this old house where I planted them some 65 years ago. I will just wear out right here. Look at that tree over there. That was hit by some lightning. That's a stroke patient . . . the good kind. It's dead."

"But," he continued, "look over there at that big birch. It's getting a little thin at the top like you are Charles. There are probably little strokes that are beginning to bite at its cortex and that's a good way to be. You can get used to it that way."

"But," he said, "I'm not either of those. I'm like the old apple tree in the back yard. Almost all of it is shot, but look at these lower branches. They still have some blossom on them and they will still bear some fruit. That's the way you ought to meet the anticipation of death. I still bear fruit. I find that the basic thing that anyone who is under the threat of death should have is work."

And this, I guess, is the basic theme of the conference. It brought back the memory of the first case I had after coming to Kalamazoo, some 31 years ago to form the first speech clinic in this area. He was a stroke patient with aphasia. I didn't know what to do. He couldn't express himself. He was able to comprehend fairly well. He made a gesture with his good hand for a pencil, so I put it into his hand. He wrote a "W", then an "R" and finally a "K". That's what he wanted. He wanted to work.

Thirty-one years ago and today, the same theme. I think it was Carl Sandburg who wrote a poem about the fair city of ours that immortalized it. He said, "The sins of Kalamazoo are small, small sins."

I hope that this conference will not be another one.

PURPOSE AND PLAN OF THE WORKSHOP

CLYDE R. WILLIS, Ph. D.
Associate Professor, Speech Pathology and Audiology
Western Michigan University, Kalamazoo, Mich.

It is perhaps strange that a workshop on aphasia, attended by many of the country's leading authorities, be held in Kalamazoo . . . Stuttering Capitol, East. Yet those of us at Western Michigan University share with you, a concern for the patient with aphasia and the frustration often resulting from that concern. As speech pathologists, we, too, find ourselves playing the role of terminal therapist for the aphasic patient; we, too, find ourselves making recommendations that, for all practical purposes, assigns the patient to "limbo" . . . to a state founded by lofty reassurances, supported by false hopes and decorated by helplessness.

It may at first seem strange that speech pathologists should be invited to tackle this problem. It may be just another example of our profession's resistance to divorce the language and speech from the speaker. Or, it may be a responsibility we inherit by default. Nevertheless, the language deficit and the problems associated with the language deficit frequently represent the major barriers to the patient's return to a full and productive life. Fortunately, speech pathology has fostered a concern for the aphasic patient as well as for the aphasia, and in doing so, has made major contributions to the overall rehabilitation program. It is, therefore, appropriate for those concerned with language function to specify and describe the barriers.

It is perhaps most strange for me to suggest to this group a course of action for the next 2 days. The inadequacies have already been revealed in the form of topics for your papers as I set out to divide all of Gaul into 10 equal parts.

The simplicity of the purpose of our meeting belies the complexity of the responsibility. Basically, we are to establish guidelines, especially for the vocational rehabilitation counselor, to be used in dealing with the patient with aphasia and vocational rehabilitation problems. We hope to survey the problem and the avenues of assistance and to synthesize the contributed information into a document which will be submitted to the Vocational Rehabilitation Administration for publication and distribution. It is hoped that your presentations and discussion will also lead to recommendation for continued efforts in meeting this serious problem with which we are all concerned.

Dr. C. Esco Obermann's recently published book, "A History of Vocational Rehabilitation in America" is a comprehensive work. It is disheartening that aphasia is not even mentioned in the book. Perhaps today, we can begin to overcome that omission.

We hope you will find your brief stay at Western Michigan University profitable and enjoyable. If we can be of service, please let us know.

A REVIEW OF THE LITERATURE ON THE VOCATIONAL REHABILITATION PROBLEMS OF THE APHASIC ADULT

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When I was asked to review the literature concerned with problems associated with the vocational rehabilitation of the individual with aphasia, I expected to find some information easily in our hospital's medical library or through the facilities of our medical center, but with the full awareness that one cannot peruse all available material. It was hoped that, by checking the Index Medicus, Psych Abstracts, and JSHD's back to the 1940's, the publications would be readily available. As you have guessed, hundreds of articles were found on the rehabilitation of the aphasic, but these were concerned primarily with the recovery of language and his adjustment to life with a residual communication disability. The few specific writings prompted an investigation into Excerpta Medica's section on rehabilitation, the Dissertation Abstracts, Rehabilitation Literature, the National Library of Medicine, the Smithsonian Institution's Science Information Exchange, books on vocational rehabilitation, and scores of letters to individuals who might know of studies or other publications. This investigation again uncovered little per se, so this paper, reflecting the depth of investigation, will be presented as an introduction to the subject and set the stage for the speakers to follow.

According to Howard Rusk, the term "rehabilitation" denotes "restoration to the fullest physical, mental, social, vocational, and economic usefulness of which they are capable . . . helping the disabled individual to readapt himself to active membership of society" (*17*, p. 286). Work that is both remunerative and satisfying represents the highest level of that restoration. In Morton Seidenfield's keynote address of a National Rehabilitation Association conference some years ago, he stated that, "It is wasteful to bring men and women back to some semblance of physical health without helping them regain the psychological, emotional, social and vocational status as well" (*18*, p. 10). Since most people earn their livelihood by the use of their hands or voice, the aphasic presents a real challenge.

The purpose of this workshop is to set up guidelines for the vocational rehabilitation of the individual with aphasia. When we begin to establish effective guidelines, we realize that there are four dimensions to this specific problem in rehabilitation. Obviously, the first is that of the patient; second, that of his family; third, that of the counseling psychologist; and fourth, industry and the world of work. Barriers exist within each ray of this spectrum.

When we begin with the first ray of the spectrum, we find that the definition of the disorder, as we say "in libro", is far from what we see in the individual with the disability "in vivo." This is true of the amputee, the hard-of-hearing, the deaf, the blind, the cardiac, and even more so, the aphasic. Numerous definitions could be quoted but, to your academic definition, will you add that this loss, in varying degrees, affects the individual's responses to everyday living and to the development of his attitudes and feelings. For it is in the latter addition to a definition that we find the inherent problems when this individual contemplates a return to former employment or opening the doors to a new occupational experience.

When evaluating the aphasic, consideration is given to the severity of the language problem, the depth of the recovery, his age, premorbid personality structure, emotional reservoir, education, and work history. We might ask ourselves the questions which Nancy Wood has proposed: "What degree of intellectual deterioration is present in the patient and what are the intellectual limitations? Will retraining permit this patient to return to his former vocation or must other plans be considered? What are the permanent limitations with respect to physical independence, vocational placement and communication?" (*22*, p. 8). To these we might add: How motivated is he *really?* How has he accepted the disability? Of course, it is possible for individuals to recover sufficiently to return to former occupations. Eisenson, however, points out that "persons who have made a good recovery from aphasia cannot always return to their previous vocations or professions without having special internal and external controls established for them" (*4*, p. 234).

The family's role can, at times, be of more signal importance than may be expected. As Buck has stated, "It is important to stress that patients with similar degrees of recovery (to his own) are those who were fortunate in having family members demonstrate positive warmth, affection, and acceptance as a result of continuous professional guidance . . . A stroke is actually a family illness and assistance should be readily available for the entire household . . . in lessening the fears that may exist. Such a procedure is far more important to patient recovery than retraining techniques recommended in our literature" (*3*, p. 37).

Biorn-Hansen's study of the social and emotional problems of aphasia revealed that the "total family unit greatly influenced the patient's progress in rehabilitation . . . The most common family problems (found in the group of 30 she studied at the University of Michigan) centered on the role changes necessitated by the illness. With the onset of disability, there was a shift of responsibility and functions to other members of the family along with changes in relationships with the spouse and children" . . . As far as job planning was concerned, "the most common difficulties were related to job status and patient's unwillingness to accept the positions of lesser prestige necessitated by disability" (*1*).

On the shoulders of the vocational counselor rests the responsibility of assessment of the potential, of community contacts for job opportunities, and of helping the individual in his choice. One barrier of effective placement may be traced to lack of communication between members of the team who have been interested and active in the rehabilitation process. Beatrice Wright feels that "certain kinds of team relations that parade under the guise of a multidisciplinary approach emphasize the fact that rehabilitation requires genuine integration of services. All too often the patient's 'case history' grows fat with reports from several disciplines each placed behind the other, but the record is never considered as a whole by those who work with the client" (*23*, p. 75). The findings of this team (the neurologist, the physiatrist, the general practitioner, the social worker, clinical psychologist, physical and occupational therapists, vocational counselor, let alone the audiologist and speech pathologist) are important in the final decision for as Krusen, Kottke and Ellwood say "the individual with aphasia usually has other concomitant disabilities such as weakness of the extremities, seizures, hemianopsia, increased emotional lability, and heightened fatigueability" (*10*, p. 131) which affect his performance as well as the kind of job for which he might be considered.

Many of the counselors with whom I have talked or corresponded in recent weeks have indicated that they feel there is a genuine interest in this problem, yet most of them were *not* reluctant to admit their awareness of difficulty in placement and the relatively few cases they have placed over the years.

James McDaniel's research into the status of vocational rehabilitation for disorders of speech and hearing indicated that the "primary problems . . . lie not in inherent difficulties of the disorder itself but in educating counselor to the obstacles, steps of correction, and expectation for improvement and employability regardless of the type of the disorder" (*11*, p. 30).

In 1963 at the University of Virginia, the VRA sponsored a short course on the aphasic adult. Corbett Reedy, a regional representative of the VRA, said at that meeting: "One of the significant advances in rehabilitation is the development of specialized programs; the tailoring of a large number of specific rehabilitation services for treating specific conditions. . . . Out of our intensive experience, study, and experimentation in recent years, we should now be able to fashion a rehabilitation process that is very specific to the condition with which we are dealing: aphasia" (*19*, p. 137).

The leaders of industry and business have long been aware of the need for proper placement of individuals with disabilities. There has been a tremendous increase in the number employed.

At the recent National Rehabilitation Workshop Paul Messmer, Technical Advisor to the President's Committee on Employment of the Handicapped, spoke of a study conducted by the Department of Labor revealing that the disabled have proven to be more efficient, more productive, less absent, and less difficult on the job. He stated that there are still employers who are unwilling to hire them probably through ignorance. The Committee has been attempting to convince, to persuade, and to illustrate that they are not hiring a "handicapped" person, but instead, they are adding to their work forces or staffs individuals with skills, knowledge, and abilities who can be trained on the job to master a task.

In December 1966 a report was made available to the Executive Committee on the President's Committee by a representative of the casualty insurance business. This publication was designed to assure that "workmen's compensation insurers do not penalize an employer for hiring disabled persons" (5, p. 2). I am sadly reminded of a 30-year-old veteran who, after intensive aphasia rehabilitation, was promised a job in a factory where he had been employed as a clerk from the time of army discharge until the sudden onset of his cerebral aneurysm. Shortly after his discharge from the hospital just prior to his return to the plant, he had his first grand mal seizure. The vocational counselor informed us that he was refused employment because he was then considered an "insurance risk." Two weeks ago, on April 27, the President's Committee on Employment of the Handicapped held a national symposium in Washington to explain the employment potential of the severely handicapped person to employers and the public.

In closing I would like to quote from Dr. Frederick Whitehouse's book UTILIZATION OF RESOURCES: A PHILOSOPHIC APPROACH TO REHABILITATION. "In a democratic society, we have no alternative than to recognize the individual's right to be aided to as much independence as is his desire and capacity. Furthermore, the economic welfare of the community demands the maximum utilization of all persons. Coincident to these is the realization that there are no dividing lines between health and disease, between work and inability to contribute. . . . Above all things, may we have the humility to open our minds to the intellectual problems involved and our hearts to the humanitarian necessity to do so. We are fortunate to begin with the same precept—service to mankind" (*21*).

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THE ROLE OF THE SPEECH PATHOLOGIST AND/OR SPEECH CLINIC IN DEALING WITH THE VOCATIONAL REHABILITATION PROBLEMS OF THE APHASIC PATIENT

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On reading this title one is reminded that the role of the speech pathologist or speech clinic in the minds of most people, both professional and lay, can be stated relatively simply: it is to assist the patient in regaining his premorbid ability to communicate. This is the ideal aim of the speech pathologist. Unfortunately it is only incompletely possible of achievement. However, the role of the speech pathologist, at least, is to modify existing aphasia in order to help the individual regain a place in society, and once again to become a productive, communicating person. When they first meet this is the principal aim of every speech pathologist and the prime hope of every aphasic. In other words, the function of a speech pathologist or clinic is a means to an end: a bit of the woof and warp in the fabric of a human being's life, and not an end in itself.

The patient is the central figure, the focus around which range professional and nonprofessional personnel, each of whom has a specific purpose and a job to do to enhance the welfare of the individual concerned. Each is interested in a different phase of his life—past, present, or future.

The first to come in contact with the patient is usually the physician. The speech pathologist is frequently the next professional person to be asked to see the patient—particularly in an acute hospital—subsequently, in the course of rehabilitation, others, such as a psychologist or a vocational counsellor, become a part of the retraining program. It is important that one not overlook the nonprofessional personnel who are part of any hospital or clinic setting. While they are not directly responsible for the patient's therapy, nevertheless they become an integral part of the whole program because of continued, repeated, and frequently close contact with the patient. It is the responsibility of the speech pathologist to see that this relationship is a fruitful and cooperative one, and not inadverently obstructive or damaging. I think the same can be said of the patient's family. The patient's limitations and requirements so far as language stimulus and cooperation are concerned, must be outlined to the family (and if necessary to business and professional associates) in terms that can be readily understood and with instructions that can be easily followed.

Of course, before one can translate language ability into social or job situations, there are a number of concrete facts that one must know. The effectiveness of rehabilitation of an aphasic patient depends on a number of interrelated factors: (1) the degree of irreparable brain damage and subsequent irrecoverable speech facilities; (2) the extent of physical impairment; (3) the psychological effect of a sudden, severe and potentially fatal illness; (4) the patient's previous education and job level, and the demands of that job for language facility in all its aspects—written or spoken.

It is absolutely essential during therapy that all the above factors be assessed accurately and treatment structured to take them into account. By means of precise (and repeated) testing it is usually possible to obtain initially a clear picture of the aphasic patient's potential language recovery and to evaluate that recovery during the course of therapy.

Although I shall confine my remarks today to the management of aphasia, nevertheless I think it must be obvious to all of us that a patient's physical disability may seriously hamper his return to previous employment, no matter how good his aphasic recovery may be. A man or woman whose livelihood depends on manual dexterity, for example, must be retrained for gainful employment, if he or she has a residual hemiplegia with perfect language facility. The converse is also true. A partially aphasic person may be able to make a living performing a manual task, requiring little language ability. Similarly, a nonaphasic hemiplegic can function with full intellectual capacity from a wheelchair.

The speech pathologist in a rehabilitation program is frequently the central point of communication between the physician, the psychologist, the vocational counselor, the employer, the family, and the patient. It is essential to learn all one can about the patient's family and previous life and work. The hours of work, the language requirements, the degree of responsibility entailed, and the patient's personal involvement in his job are all as important as the exact nature of the job itself. If part of a large organization, how flexible is that organization with regard to retraining, or shifting jobs? It may be necessary to deal with a personnel officer, with fellow workers, or with the patient's employer in order to gain this information. Without it, the speech pathologist cannot structure treatment properly, or assist the patient to develop the proper attitude to his future employment— or lack of it.

During treatment, the speech pathologist must find out whether the patient is willing (or interested), in returning to work on a different—and frequently lesser—level than before, or would insist on attempting his previous job. Not only that, but it may become obvious that the patient would prefer to change his job, even if recovery were sufficiently complete to allow him to return to his old place of employment. If the latter be the case, then the speech pathologist must help to channel that patient into a new area in which he can function adequately with a language deficit. In a rehabilitation setting, the vocational counselor and the speech pathologist must work as a team, with a high level of rapport, in order to fulfill their responsibilities to the patient undergoing job retraining or placement.

In order to do this, the speech pathologist must make frequent progress reports to the vocational counselor and sometimes to the employer. This must be done in language which is meaningful to them, particularly when discussing prognosis. It is important to remember that an employer is not usually a medically oriented person, and does not understand that an aphasic person is not necessarily a mentally retarded one. He compares the patient's language to his previous performance, and is quite understandably unable to assess his progress as we can. He is likely to want information concerning percentage and time of achievement of recovery—both impossible to give. In dealing with an employer, one must strike a balance between unfair optimism—which would put the patient in a position which he could not handle—and undue caution—which might close the employer's mind to future employment.

While vocational counselors by and large are more perceptive to the needs of an aphasic patient than are employers in general, nevertheless I think these warnings also apply to them. Working with the counselor, it should be the aim of the speech pathologist to develop an attitude of mind in the patient where he can discuss his language problems comfortably and relate it to his job requirements and potential. This takes a long time and demands frequent, understanding meetings between the patient, the counsellor and the speech pathologist.

Once the decision has been made as to the aphasic patient's employability, then future sessions should be arranged to assist him in developing and maintaining those language skills which are necessary for his contemplated job. He may have to learn a whole new "work jargon", or amplify his present language for use in a job situation. Whatever the decision, he must have repeated reassessment, and sometimes therapy, to maintain his language level over the years.

The following examples of the rehabilitation of an aphasic patient demonstrate some of the points I have made.

Consider the experience of a 39-year-old labor organizer, who suffered a cerebral embolism. He was left with minimal physical disability but gross impairment of language—which is rapidly improving. When his previous employer demanded 95 percent return to normal by March 1968 as a term for reemployment, the man himself decided not to return, but to embark on a new and quite different life as the proprietor of a small variety store—a situation which he can handle. A major illness had changed his approach to life, regardless of his degree of recovery. He had seen the other side of the mountain.

In another situation, the patient may return to the same employer in a slightly different capacity, and eventually achieve a greater degree of success than he could ever have done in his previous position. This was true of a bank executive who could no longer deal rapidly and accurately with figures after a carotide artery occlusion some years ago. However, he was otherwise unimpaired, and because of his experience was put into a position of responsibility where he is making major policy decisions on a much higher executive level than before his illness. Someone else is adding the figures.

Then, there was the 22-year-old Greek laborer who sustained a head injury and emerged with minimal aphasia. Because he was judged unable to return to heavy construction, he was trained to be a barber, and is opening his own business.

I could give you many examples of cooperative retraining and rehabilitation. However, I merely want to make the point that the speech pathologist is a pivot point in the team that handles these patients. It is often the speech pathologist who must be the communication link between the other members of the team and the patient who will never return to gainful employment. It is essential that there be good rapport between the therapist and the family and that a close relationship be established and maintained to prevent complete disruption of family life if the patient is returned to them unemployable and frequently uncommunicative. No rigid employer could be more difficult to handle than a wife who finds herself with another child to care for when her husband is returned to her from the rehabilitation center, unable to work, unable to read, and unable to talk.

In summary, in addition to the role of the speech pathologist with the aphasic patient: that is evaluation, diagnosis, prognosis, and treatment of the aphasia—in a rehabilitation situation the therapist has the additional responsibility to interpret findings frequently and clearly to the employer; to be familiar with the individual's previous occupation and its requirements, particularly as far as language is concerned; to be able to project the patient's present ability into a job situation and to be imaginative as to the kind of work he or she might be able to do in the event that they are not able to return to their former type of work. This is an advisory and interpretive position rather than one of job placement. It is an essential function, since often the speech pathologist is the one person with whom the patient can talk freely and express his fears and ambitions. This is so because this is the person above all who is trying to remove the barrier which separates this man from his fellow human beings—the barrier of aphasia.

THE ROLE OF THE VOCATIONAL REHABILITATION COUNSELOR AS SEEN BY THE SPEECH PATHOLOGIST IN PROVIDING SERVICES FOR THE APHASIC PATIENT

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Before I begin, I feel obliged to mention some of the biases that have necessarily shaped many of my comments. First of all, I have always worked in a rehabilitation center, a part of a comprehensive University Medical Center where a full team of specialists is actively engaged in the management of each patient. Secondly, the caseload of aphasic patients who are referred to us represent a severely impaired group, most of whom have at least a high school education, are post-stroke victims, and have a mean age of 62.

When I began to consider in detail the task of defining in these comments the role of the vocational counselor through the eyes of the speech pathologist I became overwhelmed by the complexity and scope of the assignment. I think this feeling reflects the complexity and scope of aphasic impairment.

Unlike many of the disabilities with which the counselor is concerned, aphasia, in and of itself (even without considering its social and psychological manifestations) is not a straight-forward impairment with boundaries—the observable phenomena of verbal impairment in aphasia is infinite—any and all of the parameters of information processing, or all levels in all modes, may be deficient. In other words, there are as many aphasias as there are aphasics; and while great pains and advances have been made to classify some of the symptom clusters, we're still left with the fact that the quality and quantity of specific symptomatology in aphasia is a highly individual matter.

How then could I really talk about "a role" for the vocational counselor? I will instead talk about many roles, some of these are real and exist in certain settings. Others are roles the speech pathologist would like to see the counselor take; still others are roles that may be required of the counselor if he will play a role at all with certain groups of aphasic patients.

Let's look at some of the severe limitations which aphasia imposes on the role of the counselor. A large share of the aphasic population, certainly in the post-stroke group, are of retirement or near-retirement age.

Work in the traditional sense, that is work for earnings, does not necessarily constitute the endpoint of rehabilitation for this group. A satisfactory terminal point of rehabilitation services might simply be the development of avocational interests and activities, within the limits of the patient's impairments, which help him make his day to day living a little more meaningful. These may be old abandoned hobbies revived, or may be completely new to the patient. They may be activities he can perform alone, or in the context of the family setting, or in a community center.

I can recall a number of aphasic patients for whom the development of avocational skills was a target-end goal for the rehabilitation process. In these cases, the counselor investigated the patient's potentials, his limitations, and his premorbid interests during the course of his stay at the rehabilitation center. One man, in particular, a 68-year-old former college professor with a severe speech deficit except in everyday greeting situations, was capable of resuming photography, a hobby which entertained him and kept him involved for at least 6 hours a day. Another patient, a 70-year-old aphasic, with moderate verbal impairment, a former trial lawyer who was active in his profession until the age of 67 had a history of deep involvement with his work to the exclusion of hobbies and relaxing activities. During the rehabilitation process he was exposed to a systematic group of activities in the greenhouse related to planting and the care of house plants. Now his weekend hours always include some kind of formal visit to a garden and his daily hours include about 3 hours of work in his new-found hobby.

The aging process itself, even in the absence of aphasic impairment, brings avocational problems to many. They are complicated and aggravated when asphasic impairment exists. The speech pathologist, often confronted with the aging aphasic patient, I believe, would like to see a broadening of the counselor's scope to include not just those problems where vocational training and placement are the goals. A concept of counseling as a service which might bring to the patient activities in lieu of work for earnings, to provide the same self-esteem, "pride and pleasure-in-doing" that work gratification can bring.

In this context, the counselor's role could be immediately creative. The challenging opportunity to get closer to the patient: his satisfactions, his family role, and a host of other aspects of his life, which might not be necessary in the straightforward vocational placement situation might challenge the counselor. The counselor helping to develop avocational goals for the aging aphasic can also play a role in shaping the community resources where the communication impaired can take part in community life. The limitations of age, then, imposed by the aging aphasic population does, indeed, provide a much broader role for the counselor if he is to be concerned with this problem. And I should like to add that I believe the counselor must become concerned with this problem.

Another limitation for the counselor serving the aphasic is implicit in the pathology of verbal behavior itself.

An example—and it almost seems redundant to bring this up here—a patient with aphasia who has difficulty in controlling the production of phonemes (and I will not discuss the psycho-social manifestations of this particular symptom of aphasia) may demonstrate his phonemic impairment in all words, an occasional word, in certain positions in words, or he may have specific phonemic impairment related to a particular class of sounds. The deficit may appear: in all phonemes, in certain classes of phonemes—it may be more prevalent in the morning, in the evening—it may exist only when he is speaking on the telephone, or when reading aloud. He may be intelligible, some of the time, part of the time, or all of the time. He may be aware of his errors and self correct or he may be totally unaware. The counselor's awareness that a particular aphasic patient has a deficit in controlling phoneme production is only the first step in identifying his impairment. It tells him very little about how the patient communicates. The impairment may be of such magnitude that his client may be totally incapable of verbalizing in any situation, or it may be so mild that he may continue to function sufficiently well to return to former employment.

Some speech pathologists expect counselors to be near-geniuses who have some linguistic know how, can make on-the-spot assessments of the verbal residuals a given aphasic patient might have, how much he can actually use, and what incapacities will interfere with his performance on the job. It is the speech pathologist's responsibility to make sure that the counselor knows and understands all of the facts related to a particular patient's verbal impairment. It is not enough for the counselor to know that a patient is aphasic. He must know the specific effects that these have on his life's functioning.

Far and above the linguistic parameters which manifest impairment, the implications of a communication loss in this society cannot be overestimated. Another limitation for the vocational counselor is acting as a link between an active full-time rehabilitation program and the world of the community. From a social-vocational-psychological point of view, deficient communication skill interferes with virtually every aspect of life. We live in a society where perhaps man's most marketable skills are all somehow tied up with verbal facility. An individual may have intact intellectual function, intact skill for his premorbid vocation, but without the verbal tools to implement these abilities he may be unable to be considered as a candidate for vocational placement. Our society has assigned a price tag to communication skills. As a matter of fact, one could cite instances where speaking skill was responsible for job success—sometimes equated with life success. The vocational counselor is acutely aware of the requirements our society makes for communication skills and his role in planning with aphasics may sometimes oblige him to persuade a verbally conscious society that a verbal deficit need not always interfere with skill in doing a job well—this may require some job modification.

The speech pathologist concerned with the diagnosis and treatment of aphasic patients is acutely sensitive to how psychologically devastating an aphasic impairment can be. In spite of our sensitivity, I wonder if we *really* know how deeply the ravages go, how deeply the aphasic feels his loss. For some patients the effects of communication deficit are so severe that they are totally immobilized. For these the necessity to take a dependent role in the family constellation represents an untenable challenge for adjustment.

For many patients the fearfulness involved in each step in the rehabilitation process—fearful of what is ahead and of what will happen if there is not improvement. The enlightened counselor could render a significant psycho-therapeutic service to the aphasic patient in the course of his contact with him. For one thing, he could provide the patient with the successful experience which could serve to reduce much of the anxiety and depression directly related to the feeling of loss and failure. This is not as easy as it might sound, for the counselor will have to take great care to assure that the prevocational and vocational experiences he provides are within the patient's capacity—he must be sure that the patient cannot only cope with the task requirements but that he is psychologically ready to cope with them and ready to confront the experience.

The counselor can also provide a significant contribution to the rehabilitation of the aphasic by acting as a motivational force—this is a crucial counselor role but with built-in dangers. Motivation and rehabilitation can be positive and constructive if directed toward short-term, realistic goals. Motivation based on promises to the patient of returning to former employment or of recovering normal speech on the other hand can often serve to do nothing more than perpetuate a false sense of hope. Rehabilitation success often consists of a frank confrontation of the patient, his family, and the community to the limitations of his disability, and to the limitations of treatment. Sometimes it is more important for the professional worker to confront these truths than anyone else—for without a realistic frame of reference, none of us can help the patient live life to its fullest. By denying the limitations, we only postpone the adjustment.

Speech therapy constitutes another limitation in the vocational counselor's task, for, I am afraid, the vocational counselor cannot always recognize what is involved in the treatment process and how far it can go. There is a prevailing misconception that as long as someone is aphasic he can benefit from treatment. To begin with, some patients are too severly impaired to recover even a modicum of function, others recover for only short periods, others require very long periods to demonstrate change in communication function. Often the counselor, perhaps overwhelmed himself with the consequences of the disability, considers a continuation of treatment indefinitely as long as the patient shows symptoms of verbal impairment as the only solution to the problems he encounters in avocational and vocational planning. We are not up in a trend which favors treatment for all patients regardless of whether or not treatment is appropriate or beneficial.

We give ourselves little credit for our experienced ability to predict with some accuracy the ultimate outcome of a patient's aphasic impairment—that is, the accuracy of our predictions 1 year after onset. We should capitalize on our ability to predict and make these prognoses known to the vocational counselor in his planning. Perhaps our rehabilitation strategy would be more reasonable and realistic if we could focus away from the patient's verbal impairment and toward a concentrated interdisciplinary effort aimed at improving his ability to live with these deficits. This approach would make the counselor's role particularly significant since his knowledge in the role of "work"—life function would help us help the aphasic.

The vocational counselor's part in the rehabilitation of aphasic patients is significant and can be much more vital if he is knowledgeable, realistic, and actually aware of the assets and limitations of age, of the pathology of speech, of speech therapy, and of the possibilities of the outcome of the rehabilitation process. Perhaps the need to work for earnings is a less ultimate factor of this process than we have thought—indeed a broad definition of the vocational counselor's role may be in order. With this frame of reference, aphasia could become one of the most challenging areas of disability encountered by the counselor—an area which today he considers hopeless. The enlightened counselor, obliged to be reasonable, inventive, resourceful, and understanding of the complexity and scope of aphasic impairment could contribute a great deal to a society in which verbal prowess is equated with status and strength of character.

THE ROLE OF THE STATE AND FEDERAL VOCATIONAL REHABILITATION AGENCIES IN PROVIDING SERVICES FOR THE APHASIC PATIENT

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Introduction

This paper is presented with certain assumptions about the content of the other papers and what they would contribute to the guidelines which are to be prepared. The topics and participants indicate that we should have a broad overview of the problems of aphasia. Therefore, it is assumed that the other papers will demonstrate that the aphasic has some unique problems and challenges beyond those which are found in many problems of communication.

It is somewhat difficult to discuss the role of the Federal and State agencies apart from the specific roles of various people within them. It should be recognized, however, that these agencies provide a framework and a system which, in turn, create opportunities to help those with aphasia to return to the world of productivity. But it is the people who implement this opportunity. The manner of doing things, the attitudes and assumptions implied by the processes, the goal perceptions—all contribute to the effectiveness and the completeness of any system for helping aphasics, or other handicapped individuals. Thus, the discussion of the agencies must be considered in this particular context.

Every effort will be made to focus on specific contributions for aphasics. It is not pertinent to present a general discussion of the overall role of the agencies or to dwell on aspects which are similar with reference to all persons needing vocational rehabilitation.

Federal Agencies

As vocational rehabilitation agencies have become more successful in placement of handicapped individuals into the productive labor market, there has been a movement outward to encompass a wider range of specific disabilities. It is quite appropriate that the Federal agency should take the initiative to tackle some of these more difficult and complex areas of disability in order to increase the number of those in these groups who could be rehabilitated. The need for this can be emphasized in many ways. For instance, in the preparation for this paper

I reviewed several publications. One was a summary of proceedings of a Triregional Short Course on Vocational Rehabilitation of Persons with Hearing and Speech Handicaps held in 1959. It is interesting to note that in the general discussion of speech disorders, aphasia was not presented as a specific disorder needing any special attention.

In later short courses aphasia was a topic which was given some specific attention, but it still did not stand out as an area with any particular and unique problems.

As a way of focusing attention on the vocational problems of aphasics, the present activity should be commended. In 1960 the publication entitled "Federal Services to Special Education and Rehabilitation" included a Comprehensive Index of Federal Services According to Type of Disability. Pages 433–437 were concerned with speech defects but aphasia was not listed as a special problem. Likewise, in the 20 pages devoted to neurological disorders there were no references to aphasia, although cerebral palsy and epilepsy received some special notations. Therefore, the attempt to establish some guidelines for reasonable expectations and procedures should have a salutary effect on directing more attention to aphasics and on the placement of more of them in job situations.

The Federal agency is also in a unique position to stimulate the development of more services for aphasics. This is already being done by the encouragement or support of training for speech pathologists, but it should be possible to go further in the support of special programs of preparation at advanced levels for work with aphasics. This in turn would make more reasonable the establishment of State-level service centers which concentrate on this particular problem.

State Agencies

It is at the State level that the direct encouragement or stimulation of the development of speech pathology services (and other services) in communities and areas where they do not exist can actually be implemented. This can be brought about through activities such as those described below.

State agencies are in a position to encourage special preparation of some counselors in relation to aphasia as they have done in connection with other specific disabilities. Through special short courses and in service training, the counselor can be helped to understand the nature, complexities and implications of aphasia. Counselors need to appreciate emotional overtones and the many facets of the disability due to inability to formulate concepts or to communicate effectively. It is important to learn how to avoid contributing to the increase in the tension of aphasics who are having difficulties in communicating. Furthermore, the counselor can be helped to look for appropriate but different solutions to job placement. I remember working with a lawyer in his early forties who had had a stroke. His verbal communication was not improving rapidly, but we determined that his former bookkeeping skills and ability to manipulate numbers were not serously impaired. Through the development of this aspect, he was able to return to useful work in a sheltered environment even though his verbal skills remained seriously impaired.

The interaction and communication between the counselor and the speech pathologist is of vital importance and should be part of this special preparation. First there is the possibility for mutual referral. Then there is the difficult problem of selecting those who can actually be helped to return to work. It is obvious that we are dealing here with only a portion of those who have aphasia. But the problem is to determine which of these has the potential. This is a decision which probably cannot be made by one professional individual—particularly the speech pathologist. The counselor can also be of considerable assistance in evaluating procedures, the effects of therapeutic procedures, the limitations, the expectations for them. The speech pathologist and counselor can work together with the additional environmental counseling that must be carried out with aphasic patients.

The counselor or the State agencies can be in a position to encourage expanded and innovative services. These might take the form of developing special sheltered workshops or the development of present workshops to include aphasics in them. Vocational agencies, both local and State, also actually act as central coordinators of several services for aphasics when these cannot be found in any one center or locality. This is an extension of what is already done when it has been decided that the focus of rehabilitation can be placed on the return of the individual to work.

It should be recognized that the local agency, and the counselors in it, are a primary source of motivation for improvement by some aphasics. They are in the position to interpret and to act as liaison agents. This is done through their ability to follow through or to followup to see what is happening to the individual after he has completed or been released from his speech rehabilitation. The possibility of going to work gives an end goal for the hard road toward recovery which cannot be ignored.

An important contribution of the local and State agencies would be to work with speech pathologists in assessing the effects of communicative defects—on the listener and the speaker himself. We need a series of studies to determine exactly how much the defect is really affecting the communication—rather than to continue to assume that this can be judged by number and type of "errors" being made. There is some evidence in mental retardation, for instance, which indicates that we have been overemphasizing the effects of certain speech disorders on employability. It is only by working with rehabilitation agencies that this can be conducted in any practical fashion.

Conclusion

It is apparent that the effective implementation of the roles of State and Federal agencies can only be brought about through the pooling of information and concepts in a fashion similar to that which is being done at this workshop. If we can bring about the optimum stimulation, encouragement, support, and provision of special needed services, the possibility of the placement of more aphasics into productive work can be substantially enhanced.

THE ROLE OF PROFESSIONAL PERSONNEL OTHER THAN SPEECH PATHOLOGISTS AND VOCATIONAL REHABILITATION COUNSELORS IN DEALING WITH VOCATIONAL REHABILITATION PROBLEMS OF THE APHASIC

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The role in language rehabilitation to be played by people who are not specifically trained in the area must be determined before their cooperation can be obtained or their services directed. All professions concerned with aphasia rehabilitation should participate, but the language pathologist should take the lead. The role may be viewed differently. Some consider the role to be an insignificant one while others recognize it to be an integral part of successful programs. My own belief is that they make a valuable contribution even in highly structured clinical settings and that their energy, wisdom, and clinical efforts are invaluable in initiating and sustaining rehabilitation for many aphasics for whom no formal program is available.

Last fall, the language rehabilitation staff at Indiana University discussed this subject. Two of the younger members stated with conviction that the aphasic patient could be managed effectively only in an intensive training service where they could receive 4 or 5 hours of training daily. After a more thorough discussion, however, it was finally concluded that ideal programs vary; some will require proportionately more assistance from professionals, while others could use proportionately more service from untrained persons. It was obvious to all that failure to incorporate the hospital personnel, family, and the community into rehabilitation would not only reduce the effectiveness of therapy for any patient, but would also reduce the number of patients who could be served to a mere handful in any state. Before the meeting was concluded, it became clear to everyone that the speech and language pathologist had a dual role; he must not only plan effective programs for managing specific patients but he must also project his knowledge so that a greater number of patients can be helped.

Much time in today's conference is directed toward the improvement of clinical prcedures. My responsibility, however, relates most to ways of helping more aphasic patients by opening new clinical sites by including more people in the rehabilitation process. A number of problems need to be resolved before these matters can be discussed meaningfully.

When should treatment begin? The answer depends on one's concept of etiology. My belief is that service should begin as soon as the disorder has reached an acute stage. I assume that all people have vestiges of aphasic behavior (some more than others), but it does not reach an acute stage for most until a cerebral episode occcurs.

The symptoms demonstrated during the acute stage will be determined by the nature and extent of the damage at the moment, and the nature of all intra- and inter-personal feedback of language behavior after the damage. The duration of the acute stage will also be determined by the same factors.

Where should the training begin? It should begin in the community hospital where the patient resides. The reason is obvious if one accepts the hypothesis that the nature of aphasic symptoms is affected by feedback from people in the situation as well as from the cerebral damage. Those people who will have the greatest effect (positive or negative) on the patient's recovery will be the ones who have the greatest interdependency with the patient. The local community is usually the only place where the family can be reached and where they may behave in a relatively normal manner.

What kinds of rehabilitation can be given? Therapy can be divided into two types: (1) informal and (2) formal. The informal therapy is used during the early period of convalescence. It involves direct counseling of families, hospital personnel and acquaintances and indirect counseling through demonstration.

Discussions alone are often meaningless but they become meaningful as soon as the person observes the clinician interacting with the patient. Some language pathologists have felt that early convalescence is not an appropriate time to begin therapy, they have believed that the brain must be stabilized. Although it is true that some patients will recover from aphasia without formal therapy, it is quite possible, if we wait until the brain has stabilized that many will never recover because they and their interdependents will have developed unsuitable attitudes and behavior patterns which resist reversal. (Preventative measures should be given priority.)

Informal therapy is nondirective as far as the patient is concerned, whereas formal therapy tends to be more directive. Most informal therapy is integrated into the patient's daily activities whereas formal therapy tends to be added to his daily routine. Most informal therapy requires participation of the family, etc., whereas informal treatment can be conducted by clinicians with or without assistance.

How does one obtain cooperation of family, hospital personnel, and community? The importance of each group to the rehabilitation of the patient must be recognized by the clinician and described to the people whose cooperation is needed.

The medical, nursing staff, and hospital administration. These people hold the key. Their support will give the language clinician the privilege of serving a professional function in the hospital by sharing responsibility in rehabilitation of the patient. He has a place to work and a right to continue to serve the patient after his discharge from the hospital. The privilege to work in the hospital is not given lightly. People who are not trained in medicine may interfere with his treatment and this might cause serious complications. Therefore, the language pathologist must realize the gravity of the situation when he approaches the hospital.

In the State of Indiana 129 hospitals admit patients with brain injuries. Up to 3 years ago, only six provided any kind of language rehabilitation. As a result of a Language Demonstration and Service program conducted by Indiana University with support from the Indiana State Board of Health and the Indiana Heart Association, that number has been increased to 17, who either are supporting or have supported a language program. In order to participate, the hospital was required to obtain approval from its medical staff and to indicate a willingness to have a clinician perform professional services in the hospital. In return, the Demonstration and Service program agreed to send a qualified person to the hospital as soon as a physician requested assistance for a brain-damaged patient. This person would give language examinations, interview the family and in cooperation with the physician plan the language program. Informal therapy would begin immediately and be continued by subsequent visits and telephone calls. The clinician would cooperate with home care programs and public health nursing associations in continuing the program after the patient was discharged. The family and hospital personnel were always invited to observe and, when possible, participate in the program. The cost of the clinical service was paid from the grant. Although this appears to be one-sided, the fact remains that few language pathologists have seen the inside of hospital diagnostic and therapeutic rooms except when they themselves have been patients. The few large and professionally advanced hospitals where language pathologists are available can not and never will be able to serve enough aphasic patients. Smaller hospitals and communities must recognize the problem and prepare to meet it.

Discussion with hospital personnel including medical, nursing and administrative staff. The following presentation is a resumé of an article written for the Monthly Bulletin of the Indiana State Board of Health. It contains information which has been presented to the personnel of various hospitals.

> "Man's most cherished possession, the ability to communicate with his fellow beings, is not appreciated until it is lost. No loss is as frustrating: jobs are lost, home life is disjointed and social life comes

to a sudden halt. Communication may be disrupted by head and neck infections, laryngectomies, emotional disturbances, brain diseases, faulty auditory perception and faulty learning. Of all the disturbances of language, aphasia has presented the greatest challenge to the researcher, clinician and patient. Prior to World War II nearly 100 years were spent in relatively fruitless research to locate the part of the brain which acted as the center for language. Little effort was made to explore other avenues of etiology since it seemed obvious that the cause of aphasia was damage to the brain.

Symptoms involve changes in the language behavior ranging from infrequent articulation errors and forgetting of words to pronounced failure in both the understanding of language and the use of language for self expression. These language deficiencies may be accompanied by a variety of other limitations such as: reduction of sensitivity to some stimuli, loss of arthmetic ability, spelling ability, music recognition ability and/or ability to identify objects by touch. Aphasia may also be accompanied by forms of paralysis, especially on the dominant side of the body.

The fact that when aphasia occurs, it comes dramatically after brain damage, has caused most studies to turn to the brain for the answer to the problem."

Unfortunately the fact has been ignored that some patients with brain damage either have not developed aphasia or have been bothered by it for only a short period of time. Had researchers shown the same interest in this group, as they did for the brain damaged patients with aphasia, it is possible that they would have identified some factors in addition to brain damage that are influential in the etiology of aphasia. Before we will be able to understand aphasia, we must answer this question—why do some people develop and maintain aphasic symptoms after brain injury while others do not? It is likely that many of the problems of diagnosis and therapy are to be found in the answer.

Preceding World War II, little hope was given for the rehabilitation of the aphasic. The problem of mental health and rehabilitation was not necessarily the physician's responsibility, especially since no well-defined theories had been presented which explained why aphasia was more than just a symptom of brain damage. As a result, the medical profession not only failed to prescribe rehabilitation procedures but often discouraged them.

For example, during the convalescence period, families were discouraged from seeking language rehabilitation. Those families that persisted were frequently advised to wait as much as 6 months because they might endanger the patient's health. Usually the assumption was made that no harm would come from waiting to see whether the patient would recover "spontaneously."

If recovery occurred, it was assumed either that damage had not been severe or that other areas had substituted for the damaged portion. On the other hand, if the language impairment did not disappear, the rationale was that damage was so "deep seated" that language recovery was not indicated.

During the war years, the feeling of the Nation for its injured servicemen ran so high that it overcame some of the placid acceptance of these assumptions. Many patients in Government hospitals received rehabilitation for disorders which had previously been considered nonrehabilitable. To everyone's joy, the results were often successful and many brain damaged veterans regained the use of language. Hospitals hired speech pathologists, psychologists, and other professional people to assist in the rehabilitation process. The task of aiding the patient to again become a useful citizen had great force behind it and required that the process be a team effort. It became increasingly obvious that the care of the patient had to be redesigned. It was no longer sufficient to try to restore his biological health, but to restore his language. The public had demanded that the veteran have a chance to regain his skill in communication so he could return as an acceptable member of the society which he had fought to protect.

The various professions working in concert with the medical group designed rehabilitation procedures which involved learning, adjustment and exercise. These procedures, combined with the medical prescriptions, created a more alert patient and above all one who had not lost hope in his future. All persons participating in the process were dedicated to the belief that the patient could improve if the proper methods were used. The responsibility for a complete failure was not blamed on "deep seated brain damage" only, but also on failure to develop and use suitable retraining methods.

The first fact learned was that brain damage was not the whole explanation because too many patients with massive brain damage made remarkable recoveries. The second fact was that the sooner rehabilitation began, the better the prognosis. This last observation caused many to examine the psychological and physiological literature for experiments which replicated to a degree some of the conditions which were present in the early convalescence of many brain-damaged patients. It was demonstrated repeatedly that well-established habits resist extinction. They become an integral part of the organism. Following are a few of the experiments which support this idea:

(1) Chicks were found to die of starvation while walking around on food which would have kept them alive. However, they had been kept from developing the skill of pecking food from a floor and later in life they were unable to develop the skill spontaneously;

(2) Healthy young male rats did not copulate upon reaching maturity because they had been raised in the presence of receptive female rats. Upon reaching maturity the presence of receptive females did not stimulate them to propagate;

(3) Female chimpanzees raised in an incubator without attention from their mothers later became very poor mothers. They refused to nurse their young, pushed them around, sat on them and were generally abusive;

(4) Other experiments on monkeys demonstrated that the extent of brain damage was not necessarily a satisfactory predictor of the behavior of the animal some months later. It was demonstrated that the behavior was jointly the function of the brain damage and of the kind of treatment the animal received during early convalescence. Many animals allowed to lie in their cages after operation and not required to help themselves in eating and moving around became comparatively helpless after a few weeks. A type of physical therapy initiated sometime afterward proved ineffective; the condition had become irreversible. On the other hand, the animals that were given physical therapy shortly after the operation did not remain helpless, not even those with massive damage. Another interesting aspect of this type of experimentation showed that loss of function was not only correlated with the extent of the damage but also with the manner used to produce the damage. For instance, animals with successive operations in which small portions of the brain were removed did not show as much disruption of function as animals with one massive lesion that equaled the total area of the smaller exterpations.

These experiments are only a few of the many which clearly demonstrate that behavior of an animal or human is the result of a variety of conditions. The preceding examples especially indicate that irreversible behavior patterns are not necessarily caused by physical damage only. Training, or lack of it, may also be an important factor.

Based on this kind of thinking, the processes used in rehabilitating the aphasic are presently being reassessed. It is clear that symptoms of aphasia are more than an extension of brain damage. The overt symptoms of language disability are subject to modification, especially if training begins early. The "wait and see" attitude about spontaneous recovery is being looked at critically. If the patient isn't expected to help himself in the beginning, he may not be able to later on. The fact that he may get well without formal therapy is not a sufficient excuse. Few physicians would "wait and see" before prescribing medication unless it had dangerous side effects.

Some objection may be raised to comparing rehabilitation of a patient's language with the medical care given to protect his biological health. In the long run, the two may be quite similar if one recognizes the withholding of therapy may result in the establishment of attitudes and habits in the patient that could interfere permanently with his language recovery. Being alive and not able to take care of one's needs may, in many instances, be worse than death itself.

How to achieve effective rehabilitation cannot be answered in one brief paragraph. The most effective rehabilitation in all instances cannot presently be determined satisfactorily since much information still is needed. Nevertheless, some useful guidelines can be offered. Of greatest importance is the attitude toward the patient and his disorder. His behavior must not be considered permanent. Modifications can be achieved if work begins early, preferably within a day or two after hospitalization. Treatment must be looked upon as a joint effort involving both biological health and rehabilitation. This means that a number of professions must participate in designing and conducting treatment procedures. In the beginning, the treatment must be carried on in a hospital environment; but as soon as possible it should be transferred to a more normal environment.

Vital to the success of the treatment is the participation and cooperation of the family. They must not be overwhelmed with meaningless professional jargon. They must understand what is known about the patient and must assume an active part in the rehabilitation process.

Underlying the whole procedure is the understanding of human behavior and the process of learning. Small changes must be observed and reinforced rather than waiting for the patient to make the "big jump" to normal behavior before he is rewarded with a statement of "well done."

Above all, the importance of the "bedside manner" cannot be underestimated. The fortunate patient is the one who is in the presence of a permissive audience which reinforces his acceptable behavior and is optimistic about the results of the training. All of his efforts receive attention and he is encouraged to keep trying. Some patients are unlucky enough to be placed in an environment where everything is done for them. Such an environment implies that these patients have a hopeless problem and that they should be pitied. These attitudes of pity reach the patient regardless of how carefully they are concealed. A way to avoid this atmosphere of depression is to understand the problem, to be thoroughly honest with all participants including the family, to recognize that a degree of recovery is possible and to get busy working toward that end. Busy people see changes about which they can be happy; gloom does not grow in the presence of optimism.

The outlook for the aphasic patient need not be a dark, hopeless one since methods are available for his care and rehabilitation. Unfortunately, these methods are not being practiced consistently and probably will not be for some time unless a concerted effort is made by all professions to deal with all of the patient's needs. Rehabilitation must begin during early convalescence before bad attitudes and bad habits become established.

The above discussion of aphasia has always been accompanied with examples of language therapy. Although some physicians have shown a real interest in the discussion, the nurses tend to show a greater interest. Perhaps this is because they are the ones who are constantly aware of the difficulties created by the language disturbance of their patients.

Discussions with family and other interested people. This kind of a heterogeneous group must be dealt with more on an individual rather than a group basis. The problem that must almost always be handled, however, involves attitudes and beliefs. To most, the brain is a mysterious organ to which are attributed all manner of capacities. Perhaps the attitude is best expressed by a statement made by my own mother while reacting to the death of an aunt shortly after a stroke. She said, "Maybe it is just as well; she would have been childish for the rest of her life anyway."

The attitude that *nothing can be achieved when the brain is damaged* must be dispelled. The patient must believe that what he does is very important. He must also be sure that what he says is important. Sometimes the patient is able to listen and understand but not speak. Untrained people do not understand this situation. Either the patient is able to communicate or he can't; for them there is no half-way.

Another attitude that must be modified involves the family's idea of how to react to loss of ability. They feel so sorry that they will do anything for "Papa." It is hard to convince them that Papa is better off doing for himself.

Another problem that interferes with many family relationships is based on the assumption that the aphasic patient is *entirely different.* They observe the differences and ignore the similarities. This results in their behaving differently even in those situations where the patient is functioning the same as before aphasia. This kind of family behavior often leads to complete rejection of the patient. When he is cut off from his family, he is nearly cut off from the world.

Above all, the clinicians must stress the fact that there is hope for recovery. This must never seem like a promise. It must never be allowed to be interpreted that language will return completely. It must always be with a "Let's try and then we will see what happens."

The clinician must be a friendly, sympathetic person who is well aware of the traumatic experience of not only the patient but the family. The availability of a clinician as a resource person cannot be exaggerated. The clinician must not only be available during the therapy session but must also be available by telephone. Good support for the family at the beginning may pay large dividends later on.

ASSOCIATED PSYCHOLOGICAL PROBLEMS OF APHASIC PATIENTS WHICH MAY INTERFERE WITH VOCATIONAL REHABILITATION

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At the risk of carrying coals to Newcastle, I am going to open my presentation with three viewpoint definitions of key terms. One is for the term *rehabilitation*, the second is for the term *aphasia*, and the third is for the process of *recovery from aphasia.*

I view rehabilitation as a process in which a counselor, clinician, or therapist is involved with a handicapped person with a common objective of helping the handicapped person to become aware of his potentials. Implied in this concept of rehabilitation is that the handicapped individual must also be made aware of his limitations.

I view aphasic impairments as disruptions of an individual's verbal habits as well as of other patterns of communicative behavior. The most severe impairments are in the individual's intellectual processes that call for a translation from an inner or private symbolization to a conventional, interpersonal linguistic system. When an adult speaks to himself and for himself, when he is engaged in what we usually consider thinking, there is no need for him to use conventional language formulations unless and until the speaker is about to say something to a listener that he—the speaker—deems it important the listener understand.

Recovery from aphasia is an indefinitely ongoing process that includes reorigination of language patterns and habits. At best, the individual may be restored to premorbid verbal proficiency, or so near such proficiency that only he may be aware of the difference in his pre- and post-morbid levels of functioning. More frequently, however, the aphasic is not the only one who is aware that he is not in complete control, or in as good control of his verbal behavior as he was prior to the onset of his aphasic involvements. In addition, adjustments often need to be made to some associated changes in sensory and motor functioning and, perhaps of even greater import, to modification in perceptual and intellectual efficiency. Recovery is a continuous process. Even after the patient seems to have stabilized in the picture he presents to others and appears to have reached what he and others regard as an acceptable plateau of performance, he may be like the man on a treadmill. He must work hard to maintain his gains, or else he may lose ground.

From this point on in my presentation, I shall take the liberty of making frequent reference to an article I had published in the August 1966 issue of REHABILITATION LITERATURE, "Vocational Implications Resulting from Intellectual and Behavioral Changes Associated with Aphasia in Adults."

In my opening to the article in REHABILITATION LITERATURE I cited an observation by Eric Hodgins, the knight errant and champion of stroke patients. Hodgins, in a paper entitled "View From the Patient's Head," noted that the one common and pervasive feeling that all stroke patients entertain is *fear*. For the patient who is or was aphasic, an underlying and ever present cause of fear is that the cerebral insult may have impaired the patient's awareness of what is going on about him. In Hodgins' words, "the brain damage may have knocked the patient's awareness askew." The patient may become chronically apprehensive that he does not appreciate fully the implications of what is being said to him, or what he reads, or even what he hears and sees on radio and television. He becomes most concerned when some kind of response is expected of him, or when he thinks some response is expected. Indeed, one cause of his fear is that he may not know when he is or is not expected to respond.

It is quite possible that before the aphasic suffered his cerebral insult he may have been as frequently and equally unaware of environmental expectations. But this was before he had reason to become concerned about his possible lack of awareness to the currents of verbal flow.

The writer Vladimir Nabokov, in his poetic novel *Pale Fire* shows keen sensitivity to the aphasic's fear of his impaired awareness and need for vigilance. Nabokov wrote:

> She still could speak. She paused and groped and found
> What seemed at first a serviceable sound,
> But from adjacent cells impostors took
> The place of words she needed, and her look
> Spelt imploration as she sought in vain
> To reason with the monsters in her brain.

The process of recovery from aphasic involvements, which includes the adjustment to the recovery, is in an important measure the learning of a strategy for when and how to reason with the impostors in the cortical cells. When is the patient to marshal his forces and directly attack the impostors, and when is the patient to wait until the impostors are off guard or too weak to impose their morbid influence on him?

At the risk of oversimplification, I am going to separate and discuss the psychological problems of aphasic patients which may interfere with vocational rehabilitation into two broad categories:

(1) Modifications of personality and intellect that may be attributed to cerebral insult. These may be considered aspects of the syndrome of organicity.

(2) Modifications of language functions that are more obviously manifestations of aphasic involvement.

We recognize, of course, that the two categories are interrelated. The personality is what the person does, or thinks he does, or is apprehensive that he may do. Nevertheless, any experienced counselor or clinician who has worked with a stroke patient, whether or not the patient was aphasic, appreciates that brain damage *per se* is often associated with changes that demand consideration in a rehabilitative program.

General Consideration

I believe that any person who has incurred a cerebral insult, whether or not the incident is associated with obvious aphasic involvements, undergoes a number of modifications in intellectual functioning that have direct implications for vocational adjustment. The adjustment indicated earlier in this paper—the need for constant vigilance relative to linguistic organization and expression—suggests that the patient should not be exposed to working situations of a nature that requires immediate verbal expression and verbal commitment without ample opportunity for a second thought or opportunity for self-correction. The desirable working situation is one in which the patient has time for second thoughts and the expression of such thoughts before he is required to make a verbal commitment. The result may well earn the aphasic or ex-aphasic a desirable reputation as a deep thinker who refuses to make snap judgments. It is not a bad reputation to establish.

Intellectual Inefficiency

Most recovered aphasics, and particularly those with temporoparietal damage, manifest some degree of *intellectual inefficiency.* Please note the avoidance of the use of the term *intellectual decrement.* This is not a euphemism. What I wish to emphasize is that, for practical purposes, intellectual inefficiency often manifests itself as a functional decrement. There is, however, a difference in implication between the terms, which makes for quite a difference in how we may regard the postaphasic and how he may come to regard himself. By intellectual inefficiency, I mean that the individual must have optimal conditions. Conditions that exist in busy and competitive environments may quickly and significantly reduce the level of intellectual functioning of the postaphasic much more than these conditions are likely to influence and impair the functioning of an adult of comparable age and educational background who has not suffered brain insult. Beyond this, there is also some evidence that actual decrements in ability to conceptualize with nonverbal materials as well as with verbal materials are found in brain-damaged adults in general and somewhat more so in those who are aphasic.*

The postaphasic adults need optimal working conditions to perform effectively. Exposure to a busy environment, to noise, movement, and other influences that most of us can usually take in stride, tends to reduce the intellectual efficiency of the recovering aphasic. On the other hand, a controlled environment may enable a postaphasic to function in a productive and satisfying manner. Perhaps the observation made many years ago by Hughlings Jackson to the effect that the aphasic is "lame in thinking" continues, but to a lesser degree, for the recovering aphasics. Such persons are not always, or even usually, obviously lame in their thinking. When conditions are well controlled, their lameness disappears. But the potential for circumstances to produce at least a little limp continue to be present for an indefinitely long time.

Perceptual Dysfunction

Many recovered aphasics continue to manifest perceptual defenses. Under conditions of stress, or under any of the less than optimal conditions previously described, a postaphasic may have increased difficulty in hearing or, perhaps more accurately, in listening. If he tries to listen, he expects himself, and is expected by others, to understand what is being said. The postaphasic may not remember that before his involvement he did not always understand what he heard. One defense against failure to understand is *not to listen.* We need also to be aware of the evidence that persons who have incurred damage to the temporal cortical area, whether or not they are aphasic, may have some degree of hearing loss greater than would be expected on the basis of age alone.** Sensory hearing loss, combined with perceptual dysfunction for auditory events, creates a serious disability, even if it is sometimes only a temporary one. The implications of such impairment for vocational rehabilitation should be apparent. Both hearing and listening ability should be assessed for a person with temporal lobe lesion. Until the counselor and the patient are confident that hearing and listening demands in a job situation are not in excess of the patient's ability for these functions, such vocation should be avoided.

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* M. L. Teuber, in discussion following O. L. Zangwill's contribution on "Intelligence in Aphasia" at a symposium of the Ciba Foundation (Ciba Foundation, London, op. cit., pp. 261–284).

**Miller found that hemiplegic patients with and without aphasia tended to show greater threshold losses for speech than for pure tones. (Miller, Journal of Speech and Hearing Disorders, November 1960, 25:4:333–339).

Visual perceptual dysfunction may also be present. Fortunately, unlike auditory events that are ephemeral, many visual events that do not involve things in movement are stable if not static. If there is some doubt as to what a visual event looks like or means, one can often take another look. The printed word does not ordinarily fade into the past once it has been viewed. The person with residual dyslexia need not expose his sensitive ego when he reviews and rereads a line.

The person with residual auditory dysphasia unfortunately does expose himself and reveals his impairment each time he asks a speaker to repeat himself. Even when the patient or ex-patient, has the courage to indicate that he has not understood what was just said, it is unlikely that the speaker will reiterate his statement exactly as the statement was first uttered. When asked to repeat, most speakers change the stress, or the rate, or substitute a new word or phrase for one previously spoken. As a result, the listener is exposed to a somewhat different flow of utterance than the one he tried but failed to understand in the first instance. His second attempt at listening and understanding may present new problems of comprehension rather than help him to resolve the old ones.

Neural Lag and Perseveration

Most persons who have incurred brain damage, and so most aphasics and many recovered aphasics, continue to show evidence of neural lag. Under stress, they manifest an increased tendency toward perseveration, to maintaining a response rather than modifying it according to the demands of changing events. Even under relatively comfortable circumstances, recovered aphasics perform better when there is no pressure for rapid modification of activity or for quick changes of a mental set. A tendency for excessive perseveration has at least three vocational implications.

The first is that the recovered aphasic needs help to deal with situations that might be conducive to stress. The second is that the recovered aphasic needs help to develop insights into the manner and circumstances of his performance and to avoid becoming involved in situations that require quick changes of set and rapid changes in type of activity. The third implication is a positive one—there are kinds of activities that permit an individual to work at his own rate without concern about environmental pressures or competition. There are also many repetitive activities in which the ex-patient can perform relatively well.

So, perseveration, the maintenance of an inappropriate mental set or the repetition of an inappropriate activity, may and can be avoided.

If avoided, anxiety, feelings of inadequacy, and occasionally even catastrophic behavior, such as fainting, sensory loss, and aggressive reactions, will not chronically become part of the behavioral patterns and the new personality of the recovered aphasic.

Tendency Toward Concretism and Ego Orientation

In the process of recovery, many persons tend to exercise what may have been a premorbid inclination toward concretism and ego orientation. Such persons often fail to make the necessary adjustments to environmental demands, especially in regard to their understanding of other persons' spoken and written language as well as in regard to their own production of language. Their thinking, their needs, the way in which language is used, are likely to be modified and governed by limitations that are expressions of their own excessive egocentricity.

In a very real sense, and despite physical recovery, such persons continue to be patients and function by expecting that the members of their environment will put out and adjust to them. Thus, the interpretation of what goes on in their personal environment has limited meaning and restricted significance. Such partially recovered aphasics should not be in a vocational position where flexibility of thinking and ability to appreciate the intent and needs of others are important considerations.

Problems Directly Associated With Language Impairment

The problems and the vocational implications arising from aphasic language involvements are obvious and need little time for consideration. There is, however, one aspect of the problem that deserves mention. I have on many occasions been impressed with an attitude of unwillingness by some aphasics to assume a fair share of responsibility in making himself understood to a listener. I am concerned about an expression of attitude that because of his history of aphasic involvement, an adult—usually an older adult—may behave as though it is the listener's task to figure him out, to divine his mood, his intent, as well as his words. Although this attitude is not peculiar to adults who are or have been aphasic, it constitutes a greater problem in dealing with aphasics and postaphasics because most of us are more likely to accept the added burden of communicative responsibility than would be the case with nonaphasics. The danger for recovering aphasics is that if we accept too large a load of communicative responsibility we may reinforce a mode of verbal and affective behavior that in the long run will make a chronic patient of someone who might otherwise have become a postaphasic.

ASSOCIATED SOCIAL PROBLEMS OF THE APHASIC PATIENT WHICH INTERFERE WITH VOCATIONAL REHABILITATION

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Permit me to de-negate and to change stress in the title assigned to me. (1) The word, *problems*, and the word, *interfere*, create a mood somewhat negative. Let's take the partly sunny approach rather than the partly cloudy approach. Why should we label the behavioral characteristics of the aphasic, such as concretism, *problems?* This is the level of functioning of the aphasic and these characteristics only become problems when misunderstood by his environment. The aphasic adult has no "social problems"—the word, *social*, implies another person.

(2) And that leads to my second request for alteration in title, i.e., a change of stress. Instead of turning our spotlight on the aphasic, let's see what the world, in this case the employer of the DVR Coordinator, needs to know about aphasia and about the people who have had this kind of disruption in language.

What Should the Employer Know About This Aphasic Adult?

1. That he is an adult human being, that he is not fragile. Perhaps this is related to our fear of the word, *stroke*, but frequently the world becomes uncomfortable around an individual who has had some change either in his heart or in his head and we regard them as "sick" people. Our whole mien changes in talking with them, but the wise employer is one who sees this is still Henry Throckmorton and treats him so.

2. That the aphasic adult is better than he looks. You can't tell a book by its cover and you can't judge competence by performance in these adults. All of us involved in language testing of the adult aphasic know he is better than we can show on tests. All clinical psychologists involved in testing of the adult aphasic know that he is better than the tests portend. All involved with prevocational testing report that the patients do better in a job than they predict they are going to do. Recently a prevocational tester found on test that an aphasic gentleman could not return to his job of grinding lens in an optical factory. However, the man is successfully doing such work at the present time. In another instance, the stroke patient could not pick up pins on command but designed an exquisite piece of woodworking. Detroit

Edison Co. say the only way they know if a toaster is repaired is to put bread in it and toast it.

3. That the aphasic adult needs time. Most of our research studies are indicating that the aphasic adult is capable of learning but at a slower rate. Presumably it is not a matter of either learning or not learning, but rather that the learning is affected by the climate or conditions under which the aphasic is working.

4. That he needs to have the spotlight off him. The aphasic presumably performs better if his surroundings are quiet and he is not the center of attention. Recently, a patient reported that she could catch errors in cribbage if she were watching the game but not if she were playing the game. Another patient was able to find errors in his office payroll if he went back at night when the other office workers were not present. He doesn't want to be stared at. One of our patients told of how the medical staff would gather around his bed, suck through their teeth and say, "How interesting!" The patient said, "I didn't want to be interesting—I just wanted to be an average guy." Another young woman told of her return to her office job and being bothered by everyone sympathizing with her.

5. That the aphasic adult needs structure. He finds it the most difficult when he has to create out of whole cloth, but if the guidelines are set up for him he performs better. Recently when a group of our aphasic adults talked to a lay audience, they were asked "What is a typical day at the University of Michigan Speech Clinic?" They were unable to answer this question until the question was rephrased to "What do you do at 8 o'clock?" "What do you do at 9 o'clock, etc." They need structure. They need a harness, but let's recall Robert Frost's comment "Freedom is moving easily in harness."

6. That the aphasic adult needs reinforcement, that directions cannot be flipped off to the aphasic adult, but rather may need to be written and spoken before meaning becomes clear. An aphasic told us that he was asked to do jury duty. The assembled group were told that the first 25 names read off should report to Judge _______ and the next 25 to Judge _______. The aphasic said by the time he figured out where his name was he didn't know where he was to report.

7. That he may experience sudden fatigue. Not long ago a wife of an aphasic patient said that it was not the situation or the familiarity of words which would determine if her husband could understand, but rather that he might fail because sudden fatigue may occur. Surely we see many of the aphasic adults performing well and then a sudden clogging of the circuits and neither ability to understand or to express an idea. He appears to experience sudden momentary disorganization. Further there is a waxing and waning of attention. At some times the individual is Jolly-jump-up and at other times a cigar store Indian.

8. That he can do only one thing at a time. Aphasics tell us they can't dance and talk at the same time, that they can't drive and talk.

Obviously the employer needs to have other knowledges about aphasia and the language of the aphasic, but I have attempted to discuss the characteristics of aphasic behavior which have a "social" smell.

Which Employer Will Be the More Successful With the Aphasic Adult?

1. The one who already has an investment in the patient because of previous employment in that firm. This brings out the patriarchal side of the employer. Let's be materialistic, considerable money has already been spent in training this individual and they would hope that their investment could be salvaged. This has been found to be especially true in small companies where employees are known to management and where management is not restricted by rank, labor unions, etc.

2. The one who is secure enough himself that he can take time to look at the other guy, one that does not need to have his dependency needs met by his employees, one that does not have to talk a lot. Not long ago, a prospective employer visited our residential program and when he left, a patient said "He was here 15 minutes and talked 20." The employer has to be secure enough himself that he does not personalize what the aphasic adult is saying. Some years ago when meeting a patient who immediately burst into tears, I wondered if he did not "like" me. This patient and I have continued to be friends through the years and he has recalled how he cried with gratitude because a speech therapist had arrived. Recently I examined a patient whose only word was "no" which he used with a variety of inflections—one's first reaction was to interpret it as a personal reaction rather than an automatism. Further, the honesty or lack of social inhibitions often seen in the aphasic adult are hard for the employer or anyone to accept. As Schuell puts it, "The aphasic cannot tell a lie"—if a professional gentleman, now aphasic, insists on asking me, a middle-aged woman, her age in a public meeting, it must be understood or in my case diverted. The employer will be the more successful if he does not overreact to the words of the aphasic, and not run for the psychologist when the aphasic says he wants an ax from the basement, but rather figure out that the man probably means he wants scissors from downstairs.

3. The one who is not oppressed by the aphasic adult, who is not afraid of the patient with a stroke. He may even be able to see the fun in some of the aphasic behavior. Recently our DVR Coordinator heard an employer using the words "writing" for *pencil* and "straight up" for *lunch*, the way an aphasic employee did. If the employer can create a climate where the aphasic adult or any other employee can make errors and not be castigated, there are good working conditions.

4. The one who can hear the cry in the wilderness. In some cases the cry is masked but if the employer can see the road signs, the danger signs, whether it be of the frustration of an aphasic adult or any other employee the working mood is good.

5. The one who recognizes the dignity of man, "the citadel within the sanctuary" to quote William James, the one who is not patronizing. Though the aphasic adult recognizes that he cannot again be a lawyer, he knows also that he does not want to be a truck driver. He wants to have a reason to get up in the morning, to have his place under the Sun, but not at the loss of his self-esteem. The employer who recognizes that it is hard for a man to return to a position of lower prestige is a more successful employer. And if he can sense the hidden interpretations the aphasic might be making, well, lah de dah! For example, one of our employers sensed an aphasic's unhappiness in being located in a basement—basement, lower-level, second-rate merchandise! DVR coordinators will seek out the noncondescending employer who may say, "Mr. B has accomplished this and this with us," not "We did so and so with Mr. B," the one who may say, "You probably can read these bills of lading" rather than "Can you read anything at all?"

6. The one who recognizes he may be more comfortable with patient 1 than with patient 2. Just as some nonaphasics make us more comfortable than others, this too will be true with the onset of aphasia. In a class of graduate students I often play recordings of a number of individuals showing different aphasic behavior and ask the students with whom they would prefer to do therapy. It is as good as running an MMPI on the graduate students.

And further the employer must not have guilt feelings because he is not comfortable with each and every aphasic. If he does not, he has recognized the individuality of his employees, aphasic or nonaphasic.

7. The one who recognizes that he may be misunderstood or that he may misunderstand. Just as his comments to one of us may be misinterpreted, the employer must expect this to happen with the aphasic adult. The employer will remember that the aphasic adult is not facile with words and may get sidetracked. Not long ago I telephoned an aphasic who had previously been enrolled in the University of Michigan Aphasia Program to ask him to lecture to a new group of aphasic adults at the University of Michigan. When he arrived for the meeting, he told me that he had been upset by my telephone call because "Three times you asked me 'are you sick?' " In reviewing what I must have said to this gentleman, it appeared that I had asked "How are you doing?" and "Glad to hear you are getting along well," and "You sound mighty good." Further, the employer may forget that the employee is aphasic and react to him inappropriately, e.g., one of our aphasic adults said to a young research assistant "You are stupid"

the research assistant pouted. When asked about this later the aphasic scolded us, saying, "You are forgetting I am aphasic. If you had remembered you would have known I meant the opposite that she was smart."

ASSOCIATED PHYSICAL PROBLEMS OF THE APHASIC PATIENT WHICH INTERFERE WITH VOCATIONAL REHABILITATION

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The cerebral pathologies which produce symptoms of aphasia in any one particular person may, also, produce physical disabilities in that person. Although the site and extent of the cerebral lesion may not have a direct relationship to the type of severity of the aphasia, the locus of the cerebral lesion will have a more obvious relationship to the amount and type of physical problems experienced by the patient. We shall discuss some specific physical symptoms of aphasic patients, particularly from the point of view of these symptoms possibly interfering with our vocational rehabilitation attempts.

Hemiplegia. Perhaps the most common physical symptom experienced by patients with aphasia is unilateral paralysis (hemiplegia) or weakness (hemiparesis) of the upper and lower extremities. Typically, the aphasic patient has dominant, left hemisphere damage with a resulting right hemiplegia. While the involved leg may have a return of function sufficient to permit good, functional ambulation, the arm and hand usually remain more involved, perhaps never acquiring a complete return of function. In the early days after the onset of hemiplegia, the patient may well be counseled and instructed to use his uninvolved hand for self-care needs, for writing, etc. The patient who is forced to use his nonpreferred hand for the first time because of dominant hand involvement may demonstrate real awkwardness whenever attempting to perform a fine motor skill. This awkwardness related to inexperience in using the nonpreferred hand for fine, discrete motor skills will usually diminish as the patient practices these fine skills. Some of this awkwardness, however, if it persists, may be related to bilateral cerebral involvement (which in effect means there is no "uninvolved" extremity) or be symptomatic of an apraxia of the relatively uninvolved side. The typical hemiplegic aphasic patient experiences over time considerable physical improvement of arm and leg, particularly if he has received adequate nursing care and physical therapy which will help to prevent unnecessary contractures of the involved side. These disciplines will also encourage the patient to utilize maximally all return as such functions may return.

It is a rare aphasic patient in my experience who does not experience enough resolution of his physical problem of hemiplegia to permit functional ambulation and gross use of his involved arm and hand.

From a vocational point of view, however, the typical aphasic patient should be discouraged from pursuing complex bimanual activities because of the presence of hemiplegia or hemiparesis.

Hemianopsia. Visual field reduction is sometimes experienced by the aphasic patient, with or without his conscious awareness. If a hemiplegic patient experiences a right homonymous hemianopsia, this right-field defect is more often the result of involvement of the optic pathways deep within the left cerebral hemisphere. The patient loses the transmission of the optic nerve of those visual impulses originating in the left half of each retina, resulting in lack of right-field vision in each eye. Many of these field defects secondary to intrahemisphere pathology are experienced by the hemiplegic patient only temporarily, with return of field function after some degree of physical stabilization has occurred. The aphasic patient should be tested by the neurologist or ophthalmologist for the possible presence of a visual field defect. If hemianopsia is present, any vocational planning should not require important visual discriminations and recognitions from the patient. It has been demonstrated that aphasic patients with right hemianopsia, who are relatively intact intellectually, can be trained to compensate for their visual field defects by moving their heads in a sweeping left to right fashion, permitting the intact field areas to be exposed to the total visual environment. For a hemianopsia which persists, it is important that the patient be made aware of his field limitations and that attempts be made to help the patient develop various head and eye movement compensations so that he might utilize his normal, intact areas of vision.

Brain Stem Involvement. It is a rare aphasic patient who experiences in addition to his aphasia a severe loss of motor control of tongue, facial muscles, palate, pharynx, and oculomotor muscles. Such a patient with such brain stem pathologies has usually had multiple CVAs or a traumatic injury of some type. Damage to the true cranial nerve nuclei is a relatively rare event for the aphasic patient. If present, however, we might well expect a severe and lasting dysarthria which might seriously impair overall speech intelligibility. Vocationally, it would not be consistent with brain stem symptomatology to expect the patient to occupy any kind of verbal position where intelligibility of his speech is a primary requisite. It should be added that dysarthria in the typical aphasic patient is rarely severe enough to prevent gross understanding of what the patient is saying. Cranial nerve nuclei involvement may make chewing and swallowing almost impossible, sometimes requiring intubation, gastrostomy, or special diets. Oculomotor problems secondary to brain stem involvement may produce diplopia and/or nystagmus, requiring special management by the ophthalmologist.

Seizures. Secondary to cerebral damage, particularly from traumatic insult to the cerebral cortex, epileptic seizures may develop. The typical aphasic patient does not experience either petit mal or gran mal seizures. If he does develop seizures, they can usually be well controlled today by medication. Anticonvulsant therapy should be initiated by the neurologist for any aphasic patient who is suspected of having or who has demonstrated seizures. A regime of anticonvulsant therapy can usually be well tolerated by the patient, permitting him to participate actively in rehabilitation and vocational training programs. For the occasional patient whose seizures cannot be controlled, or who cannot tolerate the amount of medication required for his seizure control, vocational planning should be consistent with these limitations.

Cardiovascular Irregularity. The CVA aphasic patient may continue to have the same physical problems relative to his cardiovascular system that he had before the CVA. Hypertension or coronary insufficiency may be typical symptoms which may influence recovery from aphasia and accompanying physical symptoms. Medication control of many cardiovascular complaints may be highly successful, although the occasional patient may not tolerate these medications well, perhaps experiencing dizziness, light headedness, tachychardia, etc. The cardiovascular status of the aphasic patient and the influence of medication to normalize an aberrant cardiovascular system will impose some limitation on what we can plan for the individual patient, and the reality of this imposition cannot be ignored in our vocational planning.

Apraxias. Occasionally we may find an aphasia patient who suffers from limb apraxia, an inability to use the hand voluntarily with normal involuntary hand behaviors remaining. We have observed occasional patients with a form of apraxia where the patient was literally unable to sit down in a chair when asked to do so by someone else, although in a normal chair sitting situation he could do so without any awkwardness. This disparate type of motor response, inability at the voluntary level and ability at the involuntary level, may play havoc for the best conceived vocational rehabilitation plan. The patient may appear to be inconsistent in the adequacy of his motor responses, but on closer observation we will find that the hierarchy of volition seems to determine the adequacy of response; the higher or more volitional the motor response requirement, the greater the likelihood of an apractic-like response. Specialists in physical medicine are often in the best position to test and identify for the presence of various forms of apraxia. Vocational planning should be consistent with these findings.

Sensory Losses. The aphasic patient who suffers from sensory disorders, which may range from slight tingling or numbness to severe pain, is usually the patient who has some degree of hemiparesis or hemiplegia. He will complain of decreased sensation or increased sensation in the involved extremities, particularly the arm, and on the side of the face, extending laterally from the midline. For some patients with these sensory problems, the discomfort is all prevailing and becomes their most troublesome symptom, far more disturbing to them than their paralysis or their aphasia. Fortunately, for the majority of aphasic patients any of the sensory discomforts (numbness, tingling, burning sensation, astereognosis) decrease in severity as part of the patient's total recovery or lessening of symptoms. It has been observed on occasion, however, that a patient will experience deep pain or hyperesthesia with little or no successful medical management of the problem; rehabilitation attempts will be hampered for this patient according to the extent of his discomfort and his ability to cope or live with the discomfort.

Visual and hearing losses may be experienced by occasional aphasic patients. A decrease in visual or auditory acuity is usually not secondary to the cerebral lesion which produced the aphasis, and such losses will be about as prevalent for aphasic patients as they are for the normal population at comparable ages.

Summary. The aphasic patient generally faces the same physical obstacles to recovery that any other stroke patient must overcome. We must not in our focus on the problem of aphasis forget that the patient may have physical problems, such as hemiplegia and cardiovascular instability, which may seriously interfere with successful vocational rehabilitation. For any particular aphasic patient, however, there are usually many residual skills, including normal physical functions, which need to be identified and exploited therapeutically. For successful rehabilitation requires that while we be mindful of the patient's physical limitations, we place our focus on exploiting and urging the patient to use maximally all of his residual and returning skills.

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RECEPTIVE PROBLEMS OF APHASIC PATIENTS THAT INTERFERE WITH VOCATIONAL TRAINING

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At the risk of redundancy it appears desirable to preface discussion of receptive problems of aphasic patients with a reminder of two familiar characteristics of aphasic populations. First, aphasic patients differ from one another in pattern as well as severity of aphasic symptoms. As a result one cannot make meaningful statements about the receptive problems of aphasic patients. We can only talk about problems that may be present to some relative degree in some patients and which may not exist in others.

The second relevant consideration is that most aphasic patients show marked changes over time. Consequently early assessment of the abilities and limitations of an aphasic patient is not an appropriate guide for vocational planning, and would, in fact, be expected to result in a negatively biased estimate of the patient's potential.

In this paper we shall discuss problems of auditory, visual, and visuo-spatial perception that are sometimes found in aphasic patients, and which sometimes impose limitations on vocational rehabilitation.

Auditory Problems in Aphasia

Comparatively little is known about disorders of central auditory processes. There is no evidence that either unilateral or bilateral cerebral lesions affect auditory threshold (Jerger, 1964). Pure-tone audiometry reveals no differences between brain-injured and non-brain-injured subjects in comparable age groups. There is no correlation between hearing loss and the amount of difficulty aphasic patients experience understanding spoken language.

More sophisticated audiological techniques, such as reducing redundancy of messages by low-pass filtering, or introducing binaural interference through use of competing messages, results in impaired perception in the contralateral ear in patients with temporal lobe lesions (Bocca 1955, 1958, 1963; Kimura 1961a, 1961b). Effects of reduced redundancy and competing messages appear with lesions of either hemisphere. It follows that phenomena underlying these effects cannot account for aphasic difficulties understanding spoken language, since they are observed when no aphasia is present. Hirsch (1962) and Jerger (1964) have both emphasized that although tests involving verbal materials appear most sensitive to auditory damage, these techniques do not permit analytic description of the fundamental properties of the central auditory system. Neither do they give us any information about how aphasic patients may perceive spoken language.

Partial Auditory Imperception

Initially almost all aphasic patients show mild impairments of phoneme discrimination, tending to confuse names of letters that sound alike, and sometimes words that sound alike. In only a small per cent of aphasic patients is this impairment severe or persisting.

We use a relatively simple test for phoneme discrimination, requiring identification of paired words, such as *face* and *vase*, *girl* and *curl*, *meat* and *beet*, *dime* and *time*, and so on. On this test four errors represent one, and seven errors represent two standard deviations from the mean for aphasic subjects. All patients who have made four or more errors have shown persisting evidence of partial or intermittent auditory imperception.

As recovery progresses these patients respond to spoken language appropriately with increasing frequency, and usually learn to repeat. At times, however, they continue to behave as though they do not hear. The patient may look bewildered, shake his head, or ask to have a word repeated again and again. If he can repeat, he may even say the word in a puzzled manner, as though he had never heard of it before. Recognition may occur suddenly, and appears to be an all-or-none event.

One of my patients usually responds appropriately in conversation, and can follow most reasonable verbal directions. He can read fairly literate sentences of nine or ten words aloud, answer specific questions about content, and frequently expresses appreciation of subject matter, humor or style. For example, he thought, "Snow fell softly all night," had a nice sound. In another sentence he liked the expression "legendary king." He thought, "The butler was playing tiddlywinks in the hall," hilarious, and considered that the historical verdict that Richard III was wicked was probably incorrect. For nearly 3 years he has written his name, address, and the date on his papers every day. Recently I asked him the date, immediately after he had written the inscription, and he answered, "March seventh," which was correct. I then asked him the year, and he was completely bewildered. He repeated *year* several times, shook his head, and then said, "I just don't know what you mean. It just doesn't get in." The last statement is his

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own explanation of what happens when he cannot respond, and he cannot expand it. Sometimes he says, "It's all squirrely." It is my impression that he is describing two different kinds of events: that, "It doesn't get in," refers to absence of appropriate neural events at some crucial level of processing, while "It's all squirrely," describes active interference, since this response often occurs in a context of perseverative responses.

It seems obvious that intermittent perception of verbal messages could interfere with job performance, if the patient missed an important instruction, or if observers misinterpreted his behavior when he did not comprehend.

Partial auditory imperception is always part of a complex aphasic syndrome. We have been able to follow only one patient with this kind of impairment who has gainful employment. He was an extremely intelligent man. When he found himself unable to return to his former position he capitalized on his hobby of amateur movies, and found seasonal employment running a projector in a drive-in movie, which he was able to do successfully until his terminal illness.

Auditory Recognition of Words

We infer that almost all aphasic patients initially have some trouble recognizing spoken words. The evidence is that the Ammons scores of individual patients almost always show higher scores on final than on initial testing, and the probability that these differences are due to chance is less than three in a hundred thousand. Group data also show statistically significant differences between initial and final test scores. Errors increase as a negative function of the frequency with which words occur in general language usage (Schuell, Jenkins, Landis, 1961), and this relationship obtains on both initial and final scores, in spite of statistically significant differences in total test errors.

Since the most common error is confusion between words that are associated in meaning, most errors of word recognition should probably be considered semantic or linguistic rather than perceptual errors. We have included them here because this is a dimension of impairment that interferes with the aphasic patient's ability to respond to incoming stimuli appropriately.

Perceptual errors also occur in some patients, as we have noted before. The other day my patient, whose vocabulary usage is generally superior, could not produce a meaningful sentence using the word *ankle*, which appeared in a spelling lesson. I said, "Show me your ankle," and he pointed to the top of his head. I said "No," and he said in surprise, "Isn't it on the top of your head?" Further exploration revealed he was confusing the words *ankle* and *scalp*, and even when they were written, had difficulty identifying the one he heard.

Probably the most critical implication of mild impairment of word recognition for vocational rehabilitation arises from the proclivity of occupational groups to employ terms that are not in general usage and to develop private codes. One would anticipate that an aphasic patient might experience difficulty with specialized linguistic usages as well as with terms that were new to him. A single explanation of a term would not usually be sufficient to establish it for an aphasic patient. Aphasic patients who have resumed university training have reported marked difficulty learning new symbol systems of various kinds, ranging all the way from algebraic or phonetic symbols to foreign languages. On the other hand, most aphasic patients respond positively to trade or professional jargon they have used over a long period of time.

Reduction of Auditory Retention Span

Almost all aphasic patients show some impairment of auditory or verbal retention span. Span appears related to the number of units the brain can hold in short-term memory for processing. McNeil (1966) has suggested that more than one kind of short-term memory may operate in language, and that there may be separate systems that operate on phonological, syntactical, and semantic levels, for example. However this may be, restriction of verbal span in aphasia is readily demonstrated on tasks such as pointing to objects named by the examiner, then pointing to the same objects named in series of two or three; by following short directions, then two or three of the same directions combined, or directions that are progressive in length; by repetition of series of digits of gradually increasing length; and by repetition of sentences equated for difficulty but progressive in length.

On the Minnesota Test the correlation between pointing to items named serially and following directions is .95, and between repetition of digits and repetition of sentences, .98. These remarkably high correlations indicate that whatever accounts for the variance on one of the paired tests accounts for approximately 90 and 96 percent respectively, of the variance on the other. We surmise that this factor is stimulus length, or verbal retention span if you permit this inference.

The correlations between the tests that use different response modes are somewhat lower, as one would expect, but are still high: between pointing to objects named serially and repetition of digits, .81, and between items serially and sentences, .78, for example.

Both test findings and clinical experience indicate that aphasic patients will miss parts of what people say if they say too much at a time. It was one of Head's patients (1926) who observed that he noticed clever people always said things in a few words so he could understand. The difficulty can also be minimized if the speaker pauses long enough to give the listener an opportunity to grasp one idea before going on to the next.

A former patient of ours found himself in a class section of the university in which the instructor talked very rapidly, without ever seeming to pause for breath. The patient was unable to follow the lectures. When he transferred to another section with a different instructor, he had minimal difficulty with presumably similar material. Since situations of this kind probably arise more frequently in training programs than on jobs, it seems possible that an aphasic patient could fail in a training course for a job he could handle very well; and that on-the-job training might be more desirable than training courses for many aphasic patients.

Visual and Visuospatial Problems in Aphasia

Visual acuity is not usually affected by cerebral lesions. The exception is when the optic nerve is involved, as in some head injuries and with some tumors.

Hemianopsia

The most common residual of unilateral cerebral lesions is homonymous hemianopsia, which results from interruptions of the optic radiations, and reduces vision in corresponding fields of each eye. Practically the patient simply fails to perceive objects that appear too far right or too far left of center, as the case may be. Since the defect appears in the field that is contralateral to the lesion, many aphasic patients have a right homonymous hemianopsia. Such a patient may sometimes fail to perceive words on the right side of the page when reading, for example. This is rarely a persisting problem, since most patients automatically compensate by various means, which include positioning the eyes toward the hemianopic side, turning the eyes, turning the head, looking ahead of the word when reading, and by psychological completion (Gassell and Williams, 1963).

Gassell and Williams pointed out that patients usually have little or no awareness of hemianopic defects, which consist of simple absence of sensation. In their words, the defect was not experienced but had to be discovered. They also commented on the remarkable ability of patients to compensate for it.

Eleven of the 35 hemianopic subjects they studied showed absent or minimal visual dysfunction. Fourteen reported occasional difficulty during activities that might be considered load tests of ability to adapt. Examples cited included a feeling of uncertainty in crowded places; infrequent bumping in crowds; and difficulty following a football in play when seated at the left corner of the field. One patient reported infrequent difficulty watching television if the action moved suddenly into the right corner of the screen.

In vocational planning some thought should be given to the probable consequences of a hemianopic defect in a specific job situation—for example, the consequences of not seeing an object approach from the left, or from the right side.

Occipital Lesions

Bender and Teuber (1949) studied alterations of visual perception in 68 patients with circumscribed occipital lesions resulting from head injuries incurred in World War II. The most common finding was increased fluctuation of visual thresholds. The mechanism they postulated to account for this finding was abnormal intermittance of cerebral activities subserving vision.

Using double simultaneous stimulation, they were able to demonstrate obscuration or extinction of a stimulus in a visual field that appeared intact on ordinary perimetry. Subjects required more time for perception of visual contours, and contours lacked stability. Impairment included rotation of figures, distortions, and alterations of perceived size. Objects appeared misshapen, too large or too small, too near or too far, and a moving object was sometimes reported as a series of stationary objects.

Only a very small percent of aphasic patients present visual problems of this kind, although it is possible for such impairment to coexist with aphasia, and we see it sometimes. Severe perceptual problems impose limitations on reading and writing, which rarely become functional skills, partly because the difficulties are too great for the activity to be rewarding. Obviously persisting perceptual problems also impose vocational limitations. The extent to which these are surmountable is usually determined by the entire constellation of deficits that is present.

Impaired Discrimination and Recall of Learned Visual Patterns

In aphasia there is almost always some reduction of reading and writing ability, because reading and writing utilize language, and language is impaired. For example, my ability to read or write German is very limited, although the problem is not in the visual domain.

However, some aphasic patients, who show no gross impairment of visual perception, have consistent and persisting difficulty making the fine visual discriminations and recalling the learned visual patterns used in reading and writing. In one series of such patients we studied, 75 percent had a right homonymous hemianopsia; 25 percent showed no field defect.

In reading, these patients show a consistent tendency to confuse letters that look alike, and since recognition is slow, a tendency to perceive the beginning of the word and guess at the end of it. In writing, they produce reversals and distortions of letter forms, and confuse letters that have similar visual configurations. Upper and lower case forms are often used indiscriminately. I once asked a literate patient why he had used a capital letter in an inappropriate place, and he smiled and confessed that he knew it was wrong, but he couldn't remember what the other one looked like. Sometimes a patient comments that he can't *see* a letter or a word in his mind, and patients can sometimes be observed spontaneously tracing a letter in the air or on the page, trying to utilize proprioceptive cues to aid defective visual recognition or recall.

Loss of fine visual discrimination and impaired recall of visual forms is not confined altogether to reading and writing. Impairment can be usually observed on a test like the Benton Visual Retention Test, and effects are sometimes apparent on other activities. One of our patients, a man of superior intelligence, wanted something to do one day and his wife gave him a box of trading stamps to paste in booklets. He worked carefully, and the task occupied him pleasantly all afternoon. However, he failed to observe that the stamps in the box were not all alike, and mixed them indiscriminately in the books he filled.

Usually patients with impaired discrimination and recall of letter forms relearn the letters slowly, and reading and writing approach former levels of literacy. Rate of performance remains retarded however, and occasional inconsistent errors tend to persist. The patient may inadvertently read or write *6* for *9*, *d* for *b*, *m* for *w*, reduplicate a letter or a numeral, or reverse a pair of symbols. One would anticipate that such a patient would have difficulty in an occupation that placed high demands upon either speed or accuracy of reading, writing, or use of other visual symbols. Editing, proofreading, drafting, printing, accounting, and bookkeeping are examples of occupations that would probably be contraindicated.

One of our patients was a gifted young painter, who has since produced work of exhibit quality. At one point in his recovery he was asked to paint a picture of an old house for its owner. Somewhat to his surprise, he found he could not execute this commission. His report was, "I don't understand why I can't get it right." Since he was doing good painting in an advanced class at the university at the time, one can only suppose that the subject offered problems of linear relationships, proportions, or perspective that were still too difficult for his eye to solve.

Spatial Imperception

It is generally considered that spatial concepts derive from movements of the eyes, the head, postural movements, movements used in manipulating objects, in approach and avoidance, and in exploration as well as from vision. These movements result in a continuous flow of feedback information that enables us to move around freely in space, avoid obstacles, turn left or right appropriately, manipulate objects in space, such as cars and tennis balls, and perform many kinds of skilled acts. We perceive objects visually, but utilize proprioceptive as well as exterioceptive cues to judge relationships in space and make continuous subtle adjustments to environment.

On factor analysis of the Minnesota Test we found a clear-cut visuospatial factor that included all the matching, copying, and object-assembly tests on the battery. All tasks represented on this factor utilized somatosensory as well as visual information. The visuospatial factor correlated most highly with the factor that represented gross movements of the speech musculature, (r=.58) which also required somatosensory control, and with the factor that represented discrimination and recall of learned visual patterns (r=.55).

Only a small percentage of aphasic patients show impairment of visuospatial perception, and there are usually patients with bilateral cerebral damage. Patients differ from one another, not only in severity of visuospatial impairment, but also in the extent to which each component is involved. That is, in some patients the visual component of the disturbance is more obvious, and in some the somatosensory, although at this level of integration neither process is independent of the other. In general the disturbance is more disruptive when somatosensory deficit is pronounced. Thus, talking about mild and severe impairment of visuospatial perception is something of an oversimplification, since there are differences of kind as well as degree. This division characterizes the nature of the rehabilitation problems these patients present, however, in a reasonable way, which is sufficient justification for its use.

Mild Impairment of Visuospatial Perception

Mild visuospatial impairment tends to manifest itself only on tasks that require relatively fine visuospatial control. The patient usually reports that his eyes bother him. He may get new glasses and find that they do not help. He can still read, but frequently loses his place because he has trouble following the line or moving from one line to the next. Placing a blank card or a small ruler under the line often facilitates reading in such cases. Musicians have reported that they can no longer read music, which is understandable, since position sense is impaired.

Patients commonly have difficulty spacing writing on a page. They may write over lines, be unable to keep margin, run off the edge of a page, or write over what has already been written. Unlike most aphasic patients they are rarely able to compensate for a field defect, even with artificial aids, such as a bright strip of paper in the margin of a book to mark the beginning or end of a line.

Some patients write fairly well, producing only occasional distortions, such as an extra hump or loop on a letter. Others may have a good deal of difficulty, initially, knowing where to start a letter, which way to move the hand, or how to connect two letters in a word. Sometimes a patient corrects a distorted letter by sketching in lines to improve its appearance, indicating that in this case visual discrimination exceeds control of movement patterns.

Solving arithmetic problems on paper presents great difficulties for patients with impaired visuospatial perception, because they do not know how to set figures down on the page so they can move from one step of a solution to another. For example, one patient added 49, 27, and 63 and obtained the astonishing sum of 9, 112. He added aloud, saying, "Sixteen—nineteen—six—twelve." Every addition was correct. What he wrote, however, was this:

$$\begin{array}{rr} & 49 \\ & 27 \\ & +63 \\ \hline & 1 \\ 9 & 12 \end{array}$$

Writing numerals of more than one digit, writing a column of figures, or dealing with decimal points also present spatial difficulties. Improvement occurs, but performance rarely if ever becomes completely reliable.

On factor analysis all four arithmetical processes, addition, subtraction, multiplication, and division showed significant loadings on the visuospatial factor.

Severe Impairment of Visuospatial Perception

With severe impairment of visuospatial perception, drawing usually shows marked distortion. A patient may draw the spokes in a wheel running parallel, draw windows and doors detached from a house, or on drawing a man, attach legs to arms. Sometimes a patient omits an entire side of a figure. The most common deviation of this kind is omission of an ipsilateral arm and leg on drawing a man. If a patient is pressed to finish the drawing, or even specifically directed to draw the other arm or the other leg, he is usually very resistant. If he can be induced to attempt to follow such an instruction he may draw an arm or leg detached from the body, or append it to the arm or leg drawn earlier in some bizarre fashion.

This behavior is often part of more pervasive impairment. The patient may consistently ignore all stimuli on the affected side of the body, and tend to turn consistently to the opposite side. Such a patient gets little or no spatial information from visual cues. I was talking to a patient on the ward one day when he looked up and saw his wife come in at the other end of the room. He smiled and said with obvious surprise and pleasure, "Oh, there's Jean," then stood up and walked directly away from her.

Sometimes a patient consistently ignores the affected side of his body. He may forget to shave the left side of his face, put his arm in his left sleeve, or put the shoe on his left foot. In extreme cases he may even deny that the affected arm or leg belongs to him because he has no sensory information about it.

Most patients with severe visuospatial disorientation have great trouble finding their way about, even in their own homes. In the hospital a patient who is taken to the dining room or to his ward may be unable to find his way to his table or his bed.

Because the patient himself often does not understand the nature of his difficulty, and because the observed behavior often appears bizarre, patients with marked visuospatial impairment are sometimes labeled confused, regressed, psychotic, or mentally deteriorated, and rejected as candidates for rehabilitation. Very careful diagnostic evaluation, and sometimes extended observations, are required to rule out these diagnoses, since any of these conditions may coexist with impaired visuospatial perception. It is also possible that generalized confusion may be present during the acute period of the illness and then subside. It is extremely important that a careful differential diagnosis be made when the patient is neurophysiological stable.

I once saw a patient who had been placed in a nursing home with a diagnosis of mental deterioration secondary to a cerebrovascular accident, after he was found wandering around town in an apparently confused condition. The patient himself believed he was losing his mind because he got lost on the way to his office, to which he had walked every day for 40 years. He refused to go into a nursing home, because he believed this was the first step in commitment procedures, and had to be taken by force. This episode led the physician to advise the wife that it was unsafe for her to be alone with her husband.

In the nursing home he lay upon his bed and cried, and alternately contemplated means of suicide. The situation deteriorated so rapidly that a daughter who was a biologist was summoned home. When she talked to her father she was unable to believe that he was either psychotic or mentally deficient, and arranged for him to come to Minneapolis for evaluation.

We found mild aphasia, a mild neurosensory hearing loss that cut into the speech range, left homonymous hemianopsia with minimal compensation, moderately severe visuospatial imperception, and reactive depression that began to clear as soon as the patient found someone who would talk to him about his condition. As we worked with the aphasia we obtained daily evidence of sound judgment and superior intelligence.

When the patient was convinced that his mind was intact he took over his own rehabilitation. He thought he could get along with the hearing loss, since he'd been doing it for a long time. He had not realized that he did not see to the left, but he learned to stop and look both ways when it was crucial. He decided there was nothing wrong with telling people that he had a poor sense of direction and got turned around easily, and asking the way when he felt lost. This practice not only enabled him to move around the hospital freely, but led to several friendships that convinced him that people who had had strokes were not necessarily much different from other people.

Since he continued to get turned around, sometimes, he decided to put a railing around an areaway that led down to the garage, so he wouldn't inadvertently step off into space, and a gateway at the top of the stairway, so he wouldn't fall downstairs if he got turned around going to the bathroom at night.

Finally as the nightmare began to recede, he realized that his family had not understood his difficulties any more than he had, and that they had not known what to do, but had continued to try to find help for him. Eventually he could talk about this experience without resentment, and even admit that he'd been pretty hard on his wife, sometimes, because he thought she was trying to get rid of him. He still blames the doctors, however, who wouldn't tell him anything. He has been home for 3 years now. He looks after his own investments, and he and his wife go to Florida every winter.

The most important part of the rehabilitation of this patient consisted of defining his abilities and his limitations very precisely, and demonstrating both repeatedly, until he understood the nature of his problems and was convinced that he hadn't lost his mind. We did not discharge him until he summed up the situation for himself, added, "Well, I ought to be able to cope with that, hadn't I?," and began to make his own plans.

In this case the patient had reached retirement age, and vocational rehabilitation was not considered. Instead we concentrated on plans to keep him stimulated and active. I suspect that vocational rehabilitation is not usually a practical goal for patients with serious visuospatial imperception. Rehabilitation, however, may make the difference between an individual who can function adequately in society, and one who needs to be maintained in an institution, where depression and withdrawal may effect progressive deterioration.

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EXPRESSIVE LANGUAGE PROBLEMS OF THE APHASIC PATIENT WHICH INTERFERE WITH VOCATIONAL REHABILITATION

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Introduction

Many of our cortically traumatized citizens, with a disturbance in the control of lingual usage, seem to find some ways and means to alter the depths of their despairing reductions. It must be stressed, however, that any degree of communicative recovery is outstandingly dependent upon the immediate society in which they are destined to survive. Each individual is an entity unto himself and his family. We must, therefore, continuously bear in mind that no two persons are identical; the complexity of neurological pathways prohibt such a situation and social histories also make it impossible. To help a person with any degree of language loss we must understand not only the patient before us but also his past and present relationships as well.

I wish to stress this truth—brain damaged adults cannot afford unnecessary social isolation. They retain and regain their verbal facility and functioning only through relatively constant stimulation and by participating in pleasurable communicative experiences within the confines of their homes. This type of personal activity is far more important than any regulated remedial drills in our clinics regardless of the length of time beyond the onset of cortical damage. When such persons are subjected to a continuous barrage of unneeded clinical demands they may have no choice but to voluntarily abandon oral expressions and even completely withdraw from social interaction. If this withdrawal occurs, the resulting depression may terminate in utter defeat, no matter how many language clinicians, physicians, or vocational rehabilitation counselors try to help.

It seems so hard for so many to understand that a stroke is actually a *family* illness. In any truly effective rehabilitation program continuous and regulated counseling should be readily available for the entire household. The exchange of familial and clinical information is imperative. As clinicians, the better we know the members of the family the more adept we become in providing realistic guidance for the stricken patient. Our first therapeutic target must be the home.

Start with the family and help each person in it to see the person behind the patient's chaotic screen of overall reductions. Until relative stability, insight and appropriate affection is instituted, there is little any clinician can do to help the recovery of useful language function.

It must be emphasized that we should allow and accept recurrent periods of emotional ventilation of both the patient and his family. There will be many failures and frustrations and if there is no one to listen or observe, the patient has no alternative but to drop down into the deepest stages of depression. The dysphasic's greatest enemy is depression and it can retard or spoil even the slightest recovery of functions. Even though the patient is unable to communicate, we and the family should be always available to help and interpret and accept the feelings we observe and to provide support in the black hours. We must discard our assumptions of interprofessional barriers. If we are as honest as we wish fellow workers to be, the confession of our clinical difficulties to our coworkers may lead to solutions. Such positive behavior is contagious and once we are willing to openly admit our own limitations others will do so, too—we should not be content with our ignorance. There is much to learn about dysphasia. Social murder is unforgivable and it can be just that if any clinician strays too far from his own professional field.

Emotional Tone. Prior to any abstract clinical assistance for communication improvements, we must understand the behavioral deviations that likely result from any damage to the brain. It seems most humane to first consider our patient's emotional reactions. Such an individual cannot avoid some feeling of guilt. In observing tensions of the immediate family, the patient is apt to sense that he has altered many living patterns of the persons for whom he has the highest regard. This basic concern, in combination with the multitude of personal reductions very often results in a persistent desire for complete social withdrawal. At the very least, there are three minimum essentials for positive survival in modern day society. The stricken patient is in particular need of: (1) adequate physiological rest to assist in the maintenance of a more nearly normal psychological adjustment; (2) appropriate nutrition; and (3) the reestablishment of acceptable toiletry. Through many months of re-adjustment, we must remember that these three basic functions dominate the attitudes of self-concern.

Far too often, those who have no observable symptoms of body malfunctions find it impossible to acquire either a family or professional "ear" to hear anxious discussions of self-concern. When given an opportunity, even mildly impaired persons often describe difficulty surprisingly similar to those among patients who are completely paralyzed and have no meaningful use of language. Even though there is but a slight degree of observable neurological damage such a patient is apt to have a reduction of motor and sensory controls. This assuredly contributes to the negative exaggeration of an organically damaged psyche. Each of us, in the varied professions, too often err in drawing conclusions predominately based upon abstract textbook opinions prior to careful reexaminations or even casual observations. Clients who are not afforded strong evidence that we are truly concerned may find it impossible to avoid the negative emotional pathway leading to curtailment in behavioral adjustments.

Fatigue. The majority of dysphasic patients have but little vitality combined with lasting reductions in emotional and intellectual self-controls. Even though our clients may have had enough physical rest to remain awake, they are still far below their pretraumatic energy levels. Lack of energy of course, contributes to an obvious mitigation in feelings of well-being. Even the slightest degree of excessive pressure may precipitate an immediate return to uncontrollable exhaustion. These people tire easily and tire terribly. With excessive fatigue they cannot benefit from any type of clinical pressure and even recently acquired physical controls disintegrate. When the patient is pushed unduly, particularly during attacks of fatigue, what has been accomplished may be completely erased, and in some instances, permanently.

Neurologically, the traumatized individuals rarely return to predamaged levels of intellectual and psychological behavior. Attacks of lassitude seem to be unpredictable for the most part, and variations in their alertness occur far more frequently than those experienced by you. These unpredictable periods of excessive fatigue persist even among the patients who have lived 6 to 10 years beyond their initial trauma, thus, we should readily expect to find severe and frequent attacks among those we contact shortly after their degenerative episode. We must not concentrate on the language disability alone. One of our major clinical shortcomings is the tendency to consider solely the patient's deficit with little, if any, concern for the basic attacks of neurological weakness. This, of course, lends to behaviorisms of extreme depressive withdrawal both of which are correlated with sudden states of neurological fatigue.

To elaborate this discussion further, we must carefully consider persistent variations in intellectual levels. A substantial number of differences in test scores appear to be highly correlated with a temporary lack of energy. The majority of our dysphasic clients have but a limited ability to withstand even slight degrees of abstract pressure. Each individual and his family must be considered separately, however, and when there is a desire for physical or behavioral assistance provide careful guidance but never exert undue pressure. The rehabilitative process is a slow strenuous "uphill" travel that becomes easier when a carefully planned pathway is clear and the journey is not made alone.

Nutrition. If we are aware of modification in our patient's nutritional behavior it will help us to determine the readiness for intellectual assistance. An extremely limited memory span combined with nutritional disruptions often indicates a lack of ability to tolerate any abstract activity. A vast number of patients, during the first several months at least, experience serious limitations in recognizing flight of time as well as an obvious reduction in the recall of basic activities. It is not uncommon for family members to become concerned about the patient's unreasonable demands for food. For example, within an hour after consuming a full meal, such a patient may emphatically demand another complete meal. Once the internal food pressures are no longer noted by the patient there seems to be no recall of having eaten earlier. Despite the fact that the family members carefully remind him that it has been but an hour since he has had a full meal, the patient continues to demand additional food. Overeating contributes to obvious increase in fatigue. Expanding tiredness often initiates physiological withdrawal from any kind of activity. If a patient is unable to comprehend the dangers involved in such behavior he is obviously not ready for concentration on any abstract adjustment.

Visual Disruptions. Be constantly aware of possible disruptions in visual acuity. Such deficits can contribute to an expansion of demoralization. Some patients have exaggerated startle responses when they suddenly detect others approaching them from the paralyzed side of the body. They are often thoroughly upset and meaningful language interaction can be lost. When we observe repetitions of startle and confusion we must hasten to provide the patient's physician with a detailed account of the occurrences. Total semivisual blindness or any variation thereof may be most difficult to detect. This is particularly true when the patient cannot tell us what has happened to him. The catastrophic impact of visual deficits must be emphasized strongly. Repeated startle episodes often result in an attempt to withdraw from any social interaction. When professional persons lack a reasonable understanding of this problem it appears that the patients are afforded no choice but that of developing a total feeling of rejection. This, of course, does not contribute to success in reestablishing communication and socialization.

Auditory Changes. Keep in mind that there may be a disruption in the eighth nerve function of the paralyzed side of the body. It is not uncommon for many patients to indicate an auditory reduction through difficulty in detecting the source of sound. Again we must be sure that we are communicating with the patient on the undamaged side of the body in attempting to determine if there is continuous damage in understanding, an actual change in the eighth nerve tract or both.

It is advisable to use audiological techniques that are suitable for the very young child. By using simple testing procedures we may more accurately assist the patient to circumvent further obstacles in the adjustment pattern. Audiologists should most assuredly be included in all evaluative and retraining procedures. It is imperative to administer auditory rechecks at least every 6 weeks to assist us in understanding the appropriateness of language responses. It may take several appointments to complete the entire sequence of an auditory evaluation. Always be careful to avoid lengthy concentration upon abstract content. Restrict the length of time for each session, extent of language stimulation and, above all, be constantly scanning the patient's level of physiological exhaustion.

Disordered Surroundings. There are numerous reports of perfectionistic orderliness that seems to accompany even slight cortical damage. Such behavior appears to be readily appropriate among patients who have visual disruptions. Keep in mind that many individuals are attempting to establish a higher level of security by regulating their surroundings. True, the brain-damaged patient tends to behave in an exaggerated manner, hence the concern for systematic organization may appear excessive. It is also true that abstract intellectual ability seems to be further diminished when environmental disorder occurs. Many patients will attempt to stack the paper, books, or open the paper clips scattered on the desk before they are willing to concentrate on any interpersonal communication. Eliminate distractions, *clean up before* they arrive. A majority of patients seek to retain an immaculate appearance and seem overly concerned about their clothing, hair arrangement, cosmetics, and even their fingernails. This may well be interpreted as an attempt to retain some kind of social acceptance. These persons are often realistically concerned with their personal competency so help them—don't condemn their attempts.

Epileptic Attacks. Epilepsy is often difficult for the physician to detect during the patient's relatively brief stay in the hospital. We should be well acquainted with the varied types of epileptic behaviorism so that the physician may be informed of our observations. Even though a specific type of seizure has been diagnosed the severity among repeated assaults may be altered. When milder attacks occur, the patient can have a relatively accurate awareness of surrounding activities and may also understand the majority of conversations between others in his presence—so watch your tongue! As he gradually recovers he is apt to suffer increased psychological disruptions as he recalls the verbalizations of those around him. Be exceedingly careful to maintain a close and confidential contact with the patient's physician, he will appreciate your observations. Most importantly, the patient will benefit when the threat of severe or even light convulsions can be minimized. The cessation of repeated attacks will assuredly improve self-attitudes and expand the possibility of language recovery.

In a vast number of instances, these patients objectivity and memory span are severely diminished for a period of several days after an attack—be sure he is ready to return for further training.

FAMILIAL MANAGEMENT

We are obligated to provide an extensive guidance for the families of our dysphasic cases. Far too often these families remain totally isolated from the patient and the agencies that might help them. They are forced to function in terms of erroneous guesses, fears, and unwittingly rejections. Professional persons must remember that when any clinical evaluation is based solely upon a casual impression of familial stability, unforgiveable blunders can ensue. There can be little hope for our brain damaged clients until we understand fully the attitudes of others around them. This understanding cannot be based on casual or brief consultations. Families are in dire need of warm factual guidance if they are to establish any semblance of stable support for their loved ones.

Even the well members of the patient's environment can experience a disturbance in the use of language. Some talk excessively, almost frantically, but make little sense in their state of confused misery. They chatter nonsense. Conversely, others react by becoming dreadfully silent, apparently fearful of verbalizing their concerns. Most of these persons, at either extreme, are in need of help. Both groups are unclear; both are overanxious and just cannot communicate either to their own satisfaction or to that of their listeners. Many of them are continuously fearful that they are in part to blame for the patient's illness or for its continuance. If this negative behavior persists it may become worse and further devastate their patient's recovery. We must recognize our limitations and refer the chronically disturbed to those professional persons who are qualified to evaluate their emotional states.

Sexual Disruptions. In due time, there is apt to be some degree of anxiety regarding sexual concepts of the marital union. Such mental adjustments are lavishly discussed in the professional literature in psychiatry and psychology, but the literature dealing with the dysphasic *per se* is sadly lacking in this particular aspect. A vast percentage of the patient's wives or husbands will, if given an opportunity discuss sexual concerns about both their mates and themselves. For the most part, an understanding of their patient's change in sexual drives and the probability of adequate recovery is readily effective. The speech clinician must again work closely with the physician. We must also remember nearly all degrees of personality deviations reveal symptoms of sexual instability and often interferes with willingness to discuss them. Frigidity and impotence can be the ultimate consequence following a neurological damage to the marital partner. We should readily recognize that the dysphasics may lose motivation for any social recovery or lack any desire for language recovery as this kind of rejection is experienced.

By the time the distraught members of the family come to us, they are likely to be fed up with cold factual inquisitions. They desire something more than being viewed as an entry on a statistical table. If we have made proper preparation for the contact, the basic medical facts and social summary are already in the clinical folder. If not, simply get the name and address of their attending physician. In due time, a vast amount of information will be forthcoming from all the members of the family, once they sense congenial freedom for their discussions. Don't be a normal person: be abnormal—listen to them! But most of all, don't be a poker-faced listener. These families need observable indications that we are hearing what they say. The world is already too full of unresponsive fenceposts. Hardly anything does as much good as a warm smile, a raised eyebrow, or interested gleam in the eyes of the listener, a brief verbal reflection of what they have been saying. A good clinician is sincerely interested in hearing them and he lets it be seen. In time, family groups become good listeners, their questions become more meaningful as we assist them to clarify their inquiries. Most dysphasic patients are a product of their environment and it must be reasonably stable if they are to reacquire a satisfactory existence.

Varied Familial Constellations. There are numerous varieties of familial constellations related to the problems of dysphasia and each requires careful consideration. There are *no* rigid clinical routines appropriate for each and all and we must remember to take into account the following variations: (1) the age levels of the patient and his (her) mate; (2) the education and employment background; (3) the social activities that the patient and mate particularly enjoy; (4) mental and physical health of the patient's mate; (5) emotional attachment between husband and wife and other members of the family; (6) the ages of the children within the household; (7) the parental adjustments to youngsters and vice versa; (8) the inter-child relationship and (9) the overall social drives of the family group. Obviously this is but a partial listing of the numerous variations but it is essentially a basic core of those most commonly seen. As stated heretofore, there is no one approach that will satisfy *all* families and this fact alone strongly supports regulated consultations over an *extensive* period of time.

Help for the Elderly. A significant percentage of the dysphasic patients referred to our clinics are beyond the age of retirement. Varied degrees of senility have developed among some of these patients and their acquaintances. Continuously bear in mind that some of the elderly stroke patients may have been extensively senile before their accident. Such may also be true of their "well" mates; that is, they too may have become senile several years prior to our contacting them. Be sure to clear the air before you initiate extensive counseling procedures. Should you observe symptoms similar to senility, refer these family members to medical personnel immediately.

It is particularly important for us to bear in mind that elderly persons tend to resist directions from the "youngsters" of society. Their attitudes are quite similar to ours and they subconsciously feel the same way toward us, the "kids" of the professional world. If we are careful to avoid immediate and extensive direction, positive results are more apt to be forthcoming. They must "feel us out" in order to gain confidence in our suggestions.

A reminder—and this is always to be kept in mind: many elderly patients have strong positive drives and the neurological ability to regain varied levels of former activities. Hear them out before you reject them. Such persons are intensely interested in how they may help their patients but can only provide appropriate assistance in the light of objective fact. We clinicians cannot work alone—but very few patients progress without appropriate insights and assistance on the part of the family members.

Preretirement Years. The role of the wife of the dysphasic patient is not an easy one. All sorts of anxieties arise and we must do our utmost to assist in lessening her tensions and avoid creating added negativisms in her husband's self-attitude. Many of these wives are going to find it necessary to seek employment. Those who work full time are often afforded time off for the necessary clinical contacts.

There are but very few instances where the wives are unable to keep at least one day-time appointment a week. If this is not possible, we are professionally and personally obligated to provide evening or weekend appointments for these persons. We have numerous opportunities to alter our schedules—these wives have none.

The discussion thus far has not meant to imply that the *husbands* of stricken patients are comparatively free from anxiety and sincere concern. In fact, they are quite often more traumatized with feelings of guilt based on the feeling that they must unavoidably neglect the spouse. They have to keep working in order to pay past bills. Not many have ever made their beds before, let alone done any washing, ironing and cooking aside from charcoal broiling some meats in the back yard on Sunday afternoons. After the wife has suffered a trauma, self-pity may dominate the husband's concerns. He is lost and alone and helpless. Just a little attention from us at such a time often reaps mammoth rewards. The dysphasic patients stand little chance of positive results from our clinical activities unless extensive security reigns at home.

As we concentrate upon any type of speech disorder it is evident that interpersonal adjustments have an obvious bearing upon the success of our clinical procedures. This is particularly true of the dysphasic adult because his progress is relatively dependent upon both the pre and post traumatic familial relationships. Clinical personnel should take at least an introductory course in marriage and family management. A basic knowledge of this process will assist the detection of subtle disruptions and stimulate referral to a qualified counselor. Very few persons, damaged or not, are capable of satisfactory progress when blind emotionality dominates their every move. Remember, regardless of the educational achievements observed among these families, simple clarity of expression is the tool of utmost importance for the clinician. We are conditioned to impress our colleagues with our abstract language difficulties, but what a shame, even they have a hard time following us and *vice versa.* Concentrate on the purpose of the familial contact and use language that they can understand.

Offspring in the House. It stands to reason that the children also experience a devastation in their personal security when a parent suffers a cerebral insult. When we fail to take this into account our professional, let alone personal efficiency is seriously impaired. Regardless of a specific maturation level of the offspring, a sudden organic change in either parent is indeed traumatizing. Children feel these changes keenly. We are obligated to help the nondamaged parent understand the plight of the offspring and thus regain reasonable security for them within the household. Often it is important to counsel the children too. They are a major portion of the constellation and they have serious concerns for the welfare of each family member. They want to help and will help if they are regarded as normally capable persons. True, their background of experience is limited, they simply need appropriate understanding of the problem of dysphasia. They can also assist us to understand the problems of both their parents. Often to the therapist, they provide an inside pathway to follow as he approaches the parent. We must also give the youngsters an opportunity to see us privately, talk about their school work, dances, games, home chores and general patterns of coexistence with the dysphasic parent. It is amazing how well they can express themselves once they feel secure and realize that we listen with utmost interest. They will probably be more honest than you suspected possible and will often reveal pertinent interrelationships of their parents. Most of all, the children will want some specific guidance rather than theoretical discussions. They *want* to have help. We need their help if we are to be successful in our contacts with their sick parent.

Drill your patients to your heart's content if you must, but don't anticipate progress when your patient's family is left without understanding. When we are guilty of neglecting the patient's familial constellation it is we (all professions) who are to blame for any clinical failures. Remember this before making unwarranted negative assumptions about your patient's lack of neurological recovery. No patient can see the cause and effect relationships when those persons closest to him are equally uninformed and distraught.

GUIDING THE PATIENT

Having joined other fellow patients on the rugged pathway from a cortical insult, I have found it necessary to join them in questioning some of our common professional views. Let us first consider the so-called varieties of dysphasia. Many classifications of aphasia appear expressly designed to lessen or even terminate whatever chances for behavioral progress may be present. How *should* we classify lingual losses or reductions? Can we really ever be really *sure* that the reduction of ability in *oral expression* represents a lesser severity of impairment than the *ability to understand* the utterances of others or the opposite? The dysphasic patient's survival is precarious enough without added anxiety due to unwarranted clinical suppositions. Unless the categories of language reduction are supported by the unwavering facts, the diagnosis may lead to clinical behaviors on the part of the therapist which will thoroughly confuse the patient.

The complex network of neural pathways within the hemisphere of the brain prohibit isolated damage for any *one* aspect of behavior. When there is a deficit in language expression there is also inevitably a modification in the understanding of languages uttered by other persons. So it is with personal adjustments and intellectual functioning as shown in reading and writing and other symbolic processes. Any specific reductions in comprehension or expression are variable from day to day. On Monday the patient may make sense when he talks to you; on Tuesday, he not only fails to speak sensibly, but even appears to lack the comprehension he had shown before.

A majority of stricken patients retain some ability to utilize language. Those few who show no evidence of spontaneous recovery in language may do so merely because they have failed to regain sufficient energies to do more than exist. The problem presented by these patients is always global, not partial. The interrelationships between reductions in language, emotions, intellect and health must be continuously in the minds of all professional personnel who work with the dysphasic. Professional persons in all areas of rehabilitation all need assistance in detecting potential function which has been hidden or overlooked. All of them must be very wary of tagging the patient with diagnostic labels which may not be deserved. Otherwise the patient will again be insulted. For this latter reason, if none other, in my opinion only, one major label seems necessary to categorize the trauma: DYSPHASIA—*A combined disturbance in communication, intellect, emotional stability and overall health.*

How then shall we evaluate the problem presented by a patient with dysphasia? We may find it wiser to begin with some simple questions. "Is the reduced comprehension the result of (1) anxiety and depression, or (2) intellectual devastation and deficit, or (3) predominately, a damage to the cortex leading to reduction in language control or (4) a combination of all these?" At the present time, we are usually unable to isolate any one of these factors with precision. Until we can be sure, beyond any doubt, that the problems in vocabulary reception are solely the result of a specific cortical destruction, it seems most advisable to refrain from any rigid classification. Too often our diagnostic labels blind us to the true state of affairs and prevent further objective investigation. Consequently, we often defeat the patients' efforts to recover by our diagnosis.

How do normal persons attempt to protect themselves from revealing their felt weaknesses? One technique is that of incessant chatter. By dominating the conversation with this chatter, we keep others from recognizing our inadequacies—we hope! Most of us have done just this at certain times. Though your listeners were undoubtedly bored with your gabbing, you often felt safer in your flood of verbal trivia. Numerous patients have told us that they have often done just this. I, too, employed such a defense when shortened attention spans raised a devastating head. It made me *feel* better to camouflage my sense of futility with chatter. I felt a compulsive need of controlling my listeners and even though I know it was uncomfortable for them, I felt safer in rambling on. My listeners often seemed to feel I knew not what I was doing. They felt compelled to interrupt me and wore me out with silly reiterations of what I had said, whether it made sense or not. Or they would ask me a specific question or change the topic. Each time these reactions occurred it left me with but one choice—complete silence. Despair then reigned and stimulated immediate withdrawal from communicative interaction. When my professional colleagues responded in this way, I had to flee home where my neighbors and members of my family permitted more freedom for these expressive ramblings. There I was told that most of my apparent random verbosities had strong traces of sense when they really listened to me. It seems that my neighbors were not suffering from the negative influence of professional prestige.

Far too often we impede the dysphasic's potential progress with unrealistic pressures and useless drills administered too soon. We should avoid the involvement of any patient for routine language training until after his physician finds real evidence of overall progress in health; until the psychologist has determined improvement in personal and intellectual abilities; and when the family has reported positive progress in social adjustments. Why must we hurry? The dysphasic is very susceptible to time pressure.

How long should we wait to test the patient's language and intellectual ability after the cortical episode? It is impossible to establish a specific time for all patients since even those with the least damage show wide variations of automatic recovery time. Furthermore, we are truly unable to define "automatic" or "spontaneous" recovery. A number of persons are bathed in verbal stimulation, others get but very little encouragement and there are those who receive no help at all. Some patients are said to have a *mild* impairment. When we carefully consider each patient's altered self-concept, his weak energies and familial and social disruptions it is difficult to ever use the word "mild."

To avoid the usage of single-word diagnostic labels, it is wiser to describe the day-to-day consistencies and inconsistencies. Any behavior, verbal or not, seem to have varying peaks of efficiency. Remember that all reaction is a process operation not a statistically predictable occurrence. The most minute variations often become major contributions to the process of recovery. The pattern of progress is, of course, very gradual and more apparent month-to-month than week-to-week and particularly day-to-day. Any conclusion from a 1-day clinical evaluation is obviously incomplete and too often extremely detrimental. We must not apply speculative labels to human beings or write them in our records. It seems that Hughlings Jackson was indeed a most insightful person. He was convinced that extensive observations must first be accomplished before *any* clinical generalizations can be made and even then such conclusions should be readily alterable as new facts appear.

Be sure that the clinical room is a quiet one. Eliminate as many distractions as possible; keep the environment orderly and converse naturally to help the person retain confidence in himself. These persons are "slow of thinking and reacting." But few of them are excessively hard of hearing. They have an emotional-intellectual deafness, so we must converse with them accordingly. We must casually slow down our own rate of utterance until the patient demonstrates an increase in the rapidity of his responses. In due time, most of them regain some quickness of understanding of your utterances. When this occurs and not before, increase the amount and rate of your own verbal outflow. Our major purpose is that of stimulating the patient to make attempts at oral responses. Though the response may be "jargonish" when he is trying, and is appropriately rewarded for his attempts, positive results will tend to ensue.

Brain damaged persons can be easily distraught by printed material. Even clear photography lacks dimensions of depth. Pictures are flat and the objects there in are reduced in size and shape; they are immobile and untouchable. Moreover, commercial sets of pictures contain objects that most persons rarely verbalize. Use real objects and common ones. Very few of our clients live in an elaborate setting; most of the household furnishings are simple in design. Talk about the things and the activities they know well. The patient is going to have a daily need for certain words to fulfill his vital personal needs and his comfort. If for no other reason, the clinical environment should be devoid of a desk and filing cabinets. These objects pose a threat to anyone because of their formality and negative identifications with past tensions. Our cases don't feel academic nor are they ready to incorporate a business-like attitude. A simply furnished livingroom facility for language therapy is no more costly than the usual office furnishings of desks, chairs and storage files. It is important for us to work on the words that the patient will need immediately in order that he will receive due reward for his efforts. There is no need for pictures of clothing, our patients are clothed all day, hence the stimulus is continuous.

My professional friends and colleagues were somewhat distraught with my complete rejection of their commercial language drills, machines and books. I, too, was disturbed with my negative reactions but I could not bear the insult of "grade school academics." Many words, phrases and questions felt like the sharp edges of a razor blade immediately severing any desire to express anything but purple profanity. "Read this! Say this! Build a house! Drive a car!" I was paralyzed and such a statement quickly reminded me of my physical uselessness. "Build a house!" It was quite probable that I might never return to my role as a family wage earner and my home was then in danger of being lost to the finance company. "Build a house!" I had no use for such a statement. I would not put such a phrase in my mouth even if I could. It meant nothing to my social survival and this was my primary concern. A blur of all these signal reactions erased the statement from my consciousness and I responded with the usual "Goddamm it all!" Again, I caution you to use words, phrases, and statements that have a positive meaning to daily use and the recovery process from wordlessness. I must also remind you that most patients have but little use for reading and writing for many months or even years on end. Postpone these kinds of activities until the patient reveals a need and not before.

In many instances, the recovery of language proceeds no faster than language acquired during infancy. The more successful you are with the familial education, counseling and guidance, the less often you will need to see the patient. He can have far more stimulation and need for language in a good home environment than in any clinical facility. Biweekly contacts with familial members the first month to 6 weeks should have precedent over frequent appointments with the patient. The number of visitations per week is dependent upon the patient's overall health and energies. Let us also bear in mind that many patients' husbands or wives must maintain their employment and this will also dictate the frequency of visitations. From an ideal view point, daily contact is most effective during the first month of enrollment. This not only assists in lessening the patient's reduced memory span, but it will also aid his family to raise the pertinent questions that may otherwise be forgotten. The family members under such a regime seem to demonstrate clinical insights much more quickly and provide earlier assistance for the patient at home. A decrease in clinical visitations is in order after you are satisfied that improved household insights are relatively stable. By the end of the second month, weekly appointments with the patient should suffice but keep your clinical door and/or phone open to the family group. If you do not hear from them then place a call yourself. The loss of effective communication is completely demoralizing, particularly when such persons must make frequent and often useless trips to clinical quarters. The appointments should be appropriate to each patient's individual needs.

How long should we make ourselves available? Even the most positive degree of self-confidence will have a shadow of negativism for years to come. Only our clients can answer this. We can only make sure they know that we will be available should they feel the need for supportive counsel. A few moments of our time can save months of recuperative progress. Be their complaining handkerchief, their wailingwall if they need one, in order for them to save their courage for maximal social adjustments. Always be their trusted friend, let them guide your decision for dismissal.

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